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ABSTRACT

The Communication Technology and Policy Division section of the proceedings contains the following 13 papers: "Reconceptualizing the Public Sphere: The Differential Role of Media Systems In Enabling Political Elites to set the Public Agenda" (Johnette Hawkins McCrery and John E. Newhagen); "Realizing the Potential Marketplace of Ideas: Utilizing the First Amendment to Advance Universal Service & Access to the Internet" (Justin Brown); "New Hope or Old Power: New Communication, Pornography and the Internet" (Don Heider and Dustin Harp); "Wanted: Your News Photo: Police Claims of Fair Use and the Protection of Digital Photos" (Victoria Smith Ekstrand); "Opinions Online: The Extension of Computer-Mediated Communication for Survey Research in Research Organizations" (Kelli S. Burns); "Broadcast Policy Research of Japan: A Historical Overview" (Tsutomu Kanayama); "Global 500 Companies' Outreach to Worldwide Consumers Online: A Content Analysis of Corporate Web Sites to Evaluate Organizational and Intercultural Communications" (Vandana Vijayasri); "Internet Uses and Gratifications: An Online Survey of Bulgarians at Home and Abroad" (Daniela V. Dimitrova); "What Is Interactivity and What Does It Do?" (Sally J. McMillan); "Information Source Use and Dependencies for Investment Decision-Making" (Oi-yu Chung and Lulu Rodriguez); "Interactivity: A New Approach" (Jae-Shin Lee); "Predicting Online Use Activity Via Motives, Innovative Traits and News Media Use" (Carolyn A. Lin); and "North Korea and the Internet" (Jung-Yul Cho). (RS)

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Reconceptualizing the Public Sphere: The Differential Role of Media Systems In Enabling Political Elites to set the Public Agenda

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Abstract

Reconceptualizing the Public Sphere: The Differential Role of Media Systems in Enabling Political Elites to set the Public Agenda

This paper explicates the concept of the public sphere as a virtual space created by newspapers in which political elites set the public agenda. Jurgen Habermas originally conceptualized the public sphere in terms of European salons and coffee houses where the bourgeois gathered to discuss politics. He emphasized that this discussion was both rational and interactive. While he recognized newspapers as important links between these discussion groups, he understated their importance as an enabling technology, bringing them together as a political force. The role of radio and television are discussed in terms of how they opened the public sphere to include vast audiences, but how at its base, they had little substantive impact on the nature of the agenda setting process. Finally, the Internet is discussed in terms of its potential to actually alter the process of public agenda setting in ways that other new technologies have not.

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Civic journalism, a movement attempting to counter public cynicism and apathy toward American society and government (Rimel, 1997), is now practiced in hundreds of news organizations around the country (Conte, 1996). Supporters of the movement argue traditional journalism has contributed to a decline in civic health, and it is therefore appropriate for journalists to do their part to rebuild public trust and citizen participation in the public sphere (Conte, 1996).

But just what or where is the public sphere? What behaviors or practices qualify as participation in a modern public sphere? The public sphere will first be conceptualized as a physical place where people congregate to decide issues in the public interest. The conceptualization draws heavily from theory and writings of Jurgen Habermas and Alexis de Tocqueville. Next, the public sphere will be conceptualized as a virtual space constructed by technologies. This section will examine how individual technologies have contributed to either the growth or contraction of the public sphere. And third, the public sphere will be conceptualized as a psychological space. This section will examine how the complexities of modern society make it difficult, if not impossible, for most people to engage in the rational discourse required by Habermas for the public sphere. In addition, this section will look at the potential of new media technologies to overcome some of the problems that have inhibited inclusion of a larger portion of the population in the public sphere. Finally, this paper will examine the role of the newspaper as an interactive, enabling technology in the public sphere that facilitates discussion among elites setting the public agenda.

The Public Sphere as a Physical Space

Jurgen Habermas (1989/1962) first conceived of the public sphere as a physical space in his thesis for post-doctoral qualification required of German professors. His thesis was later

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published under the title The Structural Transformation of the Public Sphere. Habermas writes that the public sphere first emerged in coffee houses in England and salons in France in the 17th and 18th centuries with the rise of capitalism and the state. He describes the public sphere as a physical place where propertied, educated men who were members of the bourgeois joined together to engage in rational-critical discourse on public matters and other issues of the day. He writes:

> The bourgeois public sphere may be conceived above all as the sphere of private people come together as a public; they soon claimed the public sphere regulated from above against the public authorities themselves, to engage them in a debate over the general rules governing relations in the basically privatized but publicly relevant sphere of commodity exchange and social labor. The medium of this political confrontation was peculiar and without historical precedent: people's public use of their reason. (1989, p.27).

There were several noteworthy characteristics of the early public sphere. First, it was a place where differences in status were bracketed as an attempt to encourage a free flow of ideas with little regard for the status of the person espousing them. It should be emphasized that the public sphere was not open to everyone -- women and poorly educated, unpropertied men were excluded -- but for those allowed in, class divisions largely disappeared. Second, within the public sphere the argument that prevailed was the argument considered most rational and most likely to serve the public interest. Participants in the public sphere were well informed and argued enlightened views that resulted from great personal deliberation. Third, the topics discussed had formerly been handled by church and state authorities and were considered problematic. Prior to the advent of the public sphere, the church and state enjoyed a "monopoly of interpretation," and there were many areas of public life that had remained undiscussed

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(Habermas, 1995, p.238). And fourth, the public sphere remained open to anyone fitting the criteria and having access to cultural products such as books and journals (Calhoun, 1992). Habermas writes "the wealthy shopkeeper visited the coffee house several times a day, this held true for the poor one as well," (1995, p.326).

Media were also present in Habermas' public sphere. Newspapers, journals, and other literary works were often physically brought into the public sphere, read, and the content discussed (Boyd-Barrett, 1995). Even in the early public sphere, newspapers and journals were an enabling technology that helped create a network bringing the forums of the coffee houses and salons together to create the larger public sphere. Journals, such as the Tatler, which was first published in 1709, created the network by serving as a link among coffee houses (Habermas, 1995). Habermas writes of the tie between the media and the coffee houses and salons:

> There was scarcely a great writer in the 18th century who would not have first submitted his essential ideas for discussion in such discourse, in lectures before the academies and especially in the salons. The salon held the monopoly of first publication: a new work, even a musical one, had to legitimate itself first in this forum (1995, p.237).

Over time, the bourgeois public sphere grew, including more of the public, and this growth contributed to its decline. The class inequalities present in the late public sphere were much greater and became impossible to bracket even at this early date. The clear distinction between the public and private domains also began to blur (Calhoun, 1992).

One of the most intriguing aspects on Habermas' conception of the public sphere is his placement of the public sphere in the private realm of civil society. He saw the public sphere as being composed of private individuals gathering in private places to engage in critical discussion.

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His definition makes conventional distinction between public and private obviously problematic (Baker, 1992). But to Habermas, the public sphere belonged in the private domain, and a separation of the state and the public sphere was essential for a healthy public sphere. Craig Calhoun expounds on Habermas' view:

> Structural transformation came about, however, as private organizations began increasingly to assume public power on the one hand, while the state penetrated the private realm on the other. State and society, once distinct, became interlocked (1992, p.21).

Habermas also argues numerous disparate interests made it harder for participants in the public sphere to think in terms of the general public interest. Instead of parties discussing public good, participants in the public sphere were pushing their own private interests. Calhoun further explains, "The notion of an objective general interest was replaced, even ideally, with one of a fairly negotiated compromise among interests. The functioning of the public sphere thus shifted from rational-critical debate to negotiation," (1992, p.22).

Habermas further believed that over time, the public sphere became a sham where shared public discourse was replaced with a passive, apolitical consumption culture (Calhoun,1992).

In Habermas' writings, he conceptualized a public sphere in England, France, and Germany, although Germany received far less mention. But, he did not extend his analysis of the public sphere to include the United States. Habermas' failure to acknowledge the thriving public sphere that existed in the United States, a public sphere as he conceived of one, is perhaps one of his book's greatest shortcomings.

When Alexis de Tocqueville, a French nobleman and political scientist, visited the United States in 1831, he was so impressed with what he termed the "voluntary associations" of men in

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the United States, he devoted much study and later description of these associations in his treatise on American life, Democracy in America. Although Tocqueville does not use the same terminology as Habermas -- he speaks of associations whereas Habermas speaks of the public sphere -- a thorough reading of both men's writings leaves little doubt they are talking about the same thing. There are obviously some differences between the European and American public spheres, differences that are both political and cultural, but the similarities are more numerous and profound than are the differences. Tocqueville even writes that the notion of association in America was imported from England and differences can be attributed to Americans' incorporation of their manners and customs (1956).

Habermas outlined four characteristics of the European public sphere prior to its decline: a bracketing of class differences that allowed for equality of status in the public sphere, rational-critical discourse aimed as serving the public interest, discussion of topics considered societal problems, and openness toward anyone meeting the criteria for inclusion. Tocqueville noted many of these above characteristics in his description of the American voluntary associations. First, he noted a general equality of status among men as they operated within their associations. But unlike Europe, there was also generally more parity among men outside the associations as well: status acquired by birth presented less of an advantage. He writes:

> Amongst the novel objects that attracted my attention during my stay in the United States, nothing struck me more forcibly than the general equality of condition among the people. I readily discovered the prodigious influence which this primary fact exercises on the whole course of society (1956, p.26).

Tocqueville also describes a concern for community and public interest present in American associations. Habermas believed one of the great strengths of the early public sphere

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was men's willingness to place public good above private interest, and he lamented the eventual rise of private interests in the European public sphere. When Tocqueville observed American associations, European associations had already become spheres of negotiation among competing private interests. He writes that Americans have the kind of public spirit that is "often a subject of regret to those who are in power" in Europe (1956, p.60). Tocqueville describes American public spirit with these words:

> The New-Englander is attached to his township, not so much because he was born in it, but because it is a free and strong community, of which he is a member, and which deserves the care spent in managing it.... In the American townships, power has been disseminated with admirable skill, for the purpose of interesting the greatest possible number of persons in the common weal (1956, p.60).

Tocqueville further noted the American associations attempted to tackle a variety of public problems -- just as the English and French participants in the public sphere had addressed issues in their day. But in America, some of these associations were formed for highly specific purposes, formed to address distinct problems such as public safety, commerce, industry, morality, and even religion (1956).

As with the European public spheres, media also played a prominent role in the American associations, facilitating discussion on public matters. Tocqueville writes that newspapers spoke of the "common weal," therefore enhancing interest in public affairs and the affairs of the associations. Tocqueville writes, "There is consequently a necessary connection between public associations and newspapers: newspapers make associations and associations make newspapers," (1956, p.203). As with the European public sphere, the newspapers helped establish a network for public sphere participants in America.

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So, there are numerous and profound similarities between the American public sphere of the 19th century as described by Tocqueville and the European public spheres of the 17th and 18th centuries as described by Habermas. Nonetheless, there are also discernible differences between the spheres with the greatest difference resting in the relationships between the spheres and their governments.

The American public sphere did not clearly reside in the private realm; it was often tied to government. The stronger relationship between government and the American public sphere is logical when one remembers that the Americans were members of a self-governing democracy who believed they had a duty to take an active role in the official governance of their communities. The public spheres of Europe occurred at times and within countries where political power was still very much vested in monarchs and church leaders.

Another difference between the spheres is that within the American associations, persons pursuing public interests coexisted with persons pursuing private interests (Tocqueville, 1956). Habermas believed that the pursuit of private interests displaced the pursuit of public interests in the European public spheres (Habermas, 1989).

A final difference between the public spheres involves the issue of admittance. The American public sphere as described by Tocqueville appears to have been more inclusive; there was more parity among the people and numbers were considered essential for a strong collective voice (Tocqueville, 1956). But like Habermas' public sphere, the American public sphere did not admit women. At the time of Tocqueville's visit to America, American women did not conduct any business or take part in political life (Tocqueville, 1956).

For Jurgen Habermas and Alexis de Tocqueville, the public sphere was a place where men gathered to rationally discuss issues of the day. Newspapers played a key role in the public sphere by supplying information, creating interest, and helping set the agenda for participants in the public sphere. The best arguments furthering the public interest became the public goal; the status of the participants in the public sphere was largely irrelevant -- they need only be admitted.

Habermas and Tocqueville's conceptions of the public sphere are an appropriate place to begin an explication of the modern public sphere, but their conceptions are far from adequate. Any explication of the modern public sphere must take into account media technologies. They have not only enlarged the public sphere from a physical to a virtual space, they are also playing an increasingly important role in elevating private interests to a level of general social concern known as public interest.

The Public Sphere as a Technological Space

In Habermas' conceptualization of the public sphere he privileges face-to-face communication, believing the most valuable role for the media is to provide information for intimate exchanges. He accepts that the printed word played a significant role in the development of the bourgeois public sphere, but he did not fully conceive of the key role for media in the public sphere. In his writings he also expresses a distrust for mediated communication, seeing it as an obstacle to "discursive rationality and communicative authenticity," (Dahlgren, 1995, p.16), and ignores the central role media have always played.

Habermas' concerns about modern media stem partly from the media's reliance on mass advertising for revenue. Although advertising dates back to ancient times, mass advertising sharply increased following the Industrial Revolution as manufacturers sought markets for their factory-produced goods (Fang, 1997). And since the Industrial Revolution, advertising has only continued to grow with the average American now seeing or hearing 500 advertisements a day

(Fang, 1997, p.65). Reliance on advertising has created a duality of purpose for the media: provide information to the public and provide consumers to advertisers (Elliott, 1982). So, much of what appears in media today is not meant to be informative and enlightening for participants in the public sphere, it is merely entertaining and designed to attract an audience that will appeal to advertisers.

Both Jurgen Habermas and American writer John Dewey have argued there are major distinctions between a public and a media audience, that a public should be conceptualized as something more. Peter Dahlgren explains:

> A public, according to Habermas and Dewey, exists as a discursive interactional process: atomized individuals, consuming media in their homes, do not comprise a public, nor do they tend to contribute much to the democratization of civil society (1995, p.19).

Philip Elliott further differentiates between an audience and public when he writes, "Radio and television set up a type of human group which has no other connection with each other than their common use of the same service" (1982, p.261). The point these authors seem to be making is that a public and an audience are conceptually different in important ways. An audience should be viewed as an disconnected aggregation of media consumers compared to a public which is an informed, enlightened group engaging in public discourse.

Therefore, there are two necessary components of communication in the public sphere, that it be interactive and rational.

Interactivity: The public sphere must include a mechanism for interaction. Passively attending to mass media does not meet this criterion of public participation. Parties in the public sphere must both receive and contribute information for the generation of a public affairs agenda. Habermas' insistence that discourse be oral is understandable if viewed from the within the context of interpersonal communication. That view holds face-to-face discourse to be the highest or purest from of communication, and also the most interactive. This view is betrayed by the manner in which interpersonal communication studies new technologies such as the Internet. Such research frequently typifies the process as "computer mediated communication," or CMC. This idealizes face-to-face communication, while it relegates technology to a role as mediator.

It is true that mass media do not rank well in terms of their potential for interactivity. Both radio and television score low on their capacity to sustain interactive communication, and newspapers usually fare even worse. This would make it seem as if newspapers would detract from, rather than accomplish, this critical prerequisite for communication in the public sphere. However, a critical fact remains that from the earliest time to the present day the actual participants in the public sphere have been a small elite. As has been pointed out, even in the heyday of the European coffee houses and salons, the one thing that bound the participants together was their membership in bourgeois society. It is difficult to see how that has changed much in the contemporary political science arena.

Philip Converse was referring to this same group of elites when he referred to the "ideologues," (1964). Ideologues are those who have sophisticated, or what Converse calls "highly constrained" belief systems. They are active and informed – and also make up only about 10 to 15 percent of the population. Converse's description of an ideologue sounds just like the inhabitants of the 18th century European coffee houses and salons in that both constitute a small group of literate, well informed citizens.

Contemporary studies of the relationship between political knowledge and activism and media use support the concept of an elite group of regular newspaper readers. Nearly any political poll will show the strongest associations between media use and indicators of social class, such as income, education, and indicators of political activism and knowledge is newspaper usage. Correlations with television use are nearly always weak or nonexistent.

The point is that while newspapers may come up short in their ability to engage mass audiences in interactive communication, they have always been capable of sustaining tangible interaction between the very elite groups that make up the core of the public sphere. Some media critics see this to be true to a fault (for example, see (Schudson, 1978). What is being argued here is that not only do the politically active go to newspapers for information, but they, or the groups with which they are affiliated, use the newspaper as a forum for the expression of their ideas. Thus, the irony is that while the newspaper may be the poorest vehicle for interactive communication among members of large audiences, it has always has served well as a platform for interaction among members of society's core elite.

Rational discourse. In overlooking the capacity of the newspaper to sustain interactivity between elites, Habermas may also have confused the nature of the discourse that goes on in the public sphere. Throughout Habermas' work on the public sphere, he argues on behalf of rational discourse among informed, enlightened individuals. If the value of the newspaper as a platform for interactive communication is not recognized, face-to-face communication emerges as the only venue for such rational discourse. The assumption here is that the best representational system for rational communication is language. But verbal communication occurs just as easily in written as in spoken form. Therefore, the better stipulation is that the discourse be verbal. This opens the door to looking at communication in the public sphere in terms of what goes on *within* elite groups and what goes on *between* them. In the 18th century model the communication within groups, in the coffee houses and salons, was oral, or face-to-face. However, *between* group communication was text, transmitted by newspaper technology. It could further be argued that it is this between group connect that gives the elite group sufficient corpus to become the dominant political force in the setting of the agenda of public affairs.

Finally, Peter Dahlgren's view that social interaction in the public sphere must address public affairs is a worthy stipulation if the public sphere is to be viewed as a place where society interacts in a process of negotiating what the public affairs agenda should be. Dahlgren writes of this requirement:

> Obviously not all social interactions can be treated as manifestations of a well-functioning public sphere; there must be a focus on politics and current affairs -- a quality of publicness attained by people interacting in their roles as citizens. Even if we find it harder these days to mark boundaries and maintain distinctions, the public sphere must have politics as its chief horizon... (1995, p.19).

Thus, an irony of broadcast media is that they have both expanded and contracted the public sphere. They have expanded the public sphere by removing time and space from the communications process, allowing the public sphere to also be a virtual space. Today, our entire society can be more or less simultaneously exposed to the agenda negotiation process as if everyone were in the same room. But media have also harmed the public sphere by hampering what Habermas considered the healthiest form of discourse: face to face communication (Thompson, 1993). Communication historian Ian Fang explains:

> The proportion of Americans who say they socialize with neighbors more than once a year has declined. Memberships in organizations fell sharply after television entered the home, and so did participation in civic associations and volunteer work...When friends invite friends over to watch television, the communion is with the screen.... The result is a growing isolation from close, attentive interaction with other people (1997, pp.139-140).

Now that it has been established that modern communication technologies have both contracted and expanded the public sphere, it is appropriate to next examine some of these technologies and the situations in which they are used and see how they might meet the above outlined criteria and expand the public sphere.

Public sphere and new communication technologies: Some see the Internet as the communications technology that has the most potential to reinvigorate the public sphere. From a technological standpoint, the Internet has both the potential for sustaining face-to-face like interactivity and supporting the vast scope of a mass medium (Newhagen & Levy, 1998). Internet users have two ports of entry into the virtual public sphere, e-mail and online chat rooms. Electronic mail can create a virtual public sphere if parties are engaging in rational discourse, through written messages, on public affairs. Obviously not all electronic mail would qualify: only those exchanges meeting the criteria for the modern public sphere. The issue of a time delay between responses should not be viewed as a problem for electronic mail's potential qualification as a public sphere technology.

Internet chat rooms that allow parties to converse through written messages also have potential to expand the public sphere. This discourse is closer to face-to-face conversation than is electronic mail because the interactivity occurs more quickly, as it does in spoken conversation. As with electronic mail, not all discourse carried on in chat rooms qualifies as the public sphere. The discourse must pertain to material that qualifies as relevant to the public sphere.

Persons watching a call-in talk show on television or listening to a call-in talk show on radio qualify only as an audience, even if the program is addressing an issue considered a public affair. But if those persons use the telephone to become a participant in the radio or television program, they have potentially entered the public sphere and are no longer relegated to the class of audience member. Through this method of participation they enter a virtual public sphere that is the creation of two technologies used in conjunction: radio and telephone or television and telephone. It is interesting to note that viewers and listeners of call-in show report them to be more interactive than other mass media, thus giving them at least the perception of participation (Newhagen, 1994).

So, there are communications technologies that have at least hypothetically expanded one's ability to participate in the public sphere. Some of these technologies have brought about a decrease in face-to-face discourse, but they should also be recognized for having expanded the possibilities for discourse by creating the potential for a public sphere that is not limited to a physical space.

Throughout this section on technology and the public sphere, these authors have repeated the caveat that not all personal discourse qualifies as the public sphere. The discourse must pertain to the process of public affairs agenda setting and maintenance of public affairs, and it must be grounded in reasoning -- opinions offered must be the result of great deliberation on the part of individuals who have gathered much information and have much knowledge on a given subject.

Habermas argues in his explication of the public sphere that individuals must engage in rational communication: communication guided by knowledge that can be coherently defended through argumentation (1989). Only then do individuals reach resolutions approaching truth and what is in the public interest.

But with the complexity of human societies today and the vast amount of information and understanding one must have to engage in the kind of rational discourse envisioned by Habermas, is it even possible for non-elites to participate in the public sphere? Is the public sphere, despite the inclusion of the virtual sphere, smaller than it once was because participation now requires more cognitively complex reasoning skills than ever before? It is important to recognize that just because a technological potential exists, there is no guarantee it will be adopted. For instance, some media critics have already voiced skepticism that the Internet will result in any substantive change in the nature of political power sharing among elites (Anonymous. 1999).

The Public Sphere as a Psychological Space

In 1922 Walter Lippman wrote of the complexities of modern society and the difficulties these complexities present in a democracy where common people without special expertise are expected to be informed and participate in the affairs of government. He also wrote that the knowledge and understanding so many people have of public affairs is limited, or even flawed. "Inevitably our opinions cover a bigger space, a longer reach of time, a greater number of things, than we can directly observe. They have, therefore, to be pieced together out of what others have reported and what we can imagine," (p.53).

Understanding of public affairs is further flawed today because it is manipulated by elites attempting to manage public opinion on public affairs. Walter Lippman explains:

> Within the life of the generation now in control of affairs, persuasion has become a self-conscious art and a regular organ of popular government. None of us begins to understand the consequences, but it is no daring prophecy to say that the knowledge of how to create consent will alter every political calculation and modify every political premise. Under the impact of propaganda, not necessarily in the sinister meaning of the

> word alone, the old constants of our thinking have become variables (1922, p.158).

So, Lippman conceives of public opinion as the aggregate opinion of persons whose individual opinions are pieced together from what they hear, read, see and are able to imagine. He also believes that their exposure to information is manipulated to create a certain opinion that meets the needs of elites.

Lippman's idea of public opinion is quite different from Habermas' conception. Habermas believes public opinion is what develops in the public sphere as the result of rational discourse – he sees public opinion as culmination of the sharing of information among enlightened individuals operating in the public interest. Craig Calhoun further describes Habermas' view when he writes:

> This replaces the notion of public opinion as the mere opinion of isolated individuals taken in the aggregate, the reputation that emerges in the mirror of dispersed opinions, and the opinion of the common sort of people. Rather, public opinion comes to refer more positively to the views held by those who join in rational-critical debate on an issue (1992, p.17).

Habermas' idea of public opinion and the public sphere can be described as a normative conception. But is it wishful thinking? If Lippman's conception of public opinion and the public sphere is more accurate, the modern public sphere may in fact be quite small.

To further delve into the public's understanding of public affairs and their capacity to participate in the public sphere, it is also necessary to examine the contributions of research into information processing theory that accounts for how the human mind works. Information processing theory states that knowledge is organized as connections among concepts, sometimes called nodes, which reside in schemata. These schemata influence what one sees and remembers as well as how one interprets the world (Hamill & Lodge, 1986). Access to knowledge in one of these concepts requires activation.

The important thing to note about information processing with respect to the public sphere is that research has shown experts in public affairs or politics process information differently from novices (Lau & Erber, 1985). This occurs because experts have better developed schemata with more and stronger links, larger units of knowledge, and units organized in a more meaningful way. The result of this difference in processing is experts, also known as schematics, are more likely to integrate new information and recall it if there is an opportunity for activation. Non-experts are more likely to employ piecemeal processing, which does not integrate the information into a schema, and therefore provides a weaker basis for memory, inference, and recall (Fiske, 1986).

In addition, non-experts – as well as some experts – are also more likely to employ heuristics, including emotion, that allow them to efficiently assess a situation without much of a knowledge base (Bucy & Newhagen, 1998). Often their assessment is no deeper than assigning a label of good or bad, but surprisingly, heuristic processing often serves people well, leading them toward accurate assessments irrespective of knowledge. Nonetheless, those who bring nothing more than heuristic processing to the discussion do not contribute as much to the public sphere.

Converse (1964) echoed many of these same ideas regarding experts and non-experts, but espoused these ideas without the benefit of social cognition research. He wrote this of the differences between ideologues (experts) and non-ideologues (non-experts):

> If an informed observer hears a surprising policy statement in the news by the secretary of defense, he may prick up his ears and pay close attention. He relates this information to what he knows of recent policy, what he knows of the secretary's relationship to the

> president, what he knows of past positions the secretary may have taken, and the like, since he is intensely interested to detect even small reorientations of national policy. In short, he automatically imports enormous amounts of prior information that lends the new statement high interest. The poorly informed person, hearing the same statement, finds it as dull as the rest of the political news (Fiske & Kinder, 1981, p.178).

Through his research, Converse also concluded only about ten percent of persons can be classified as ideologues or near ideologues (Fiske & Kinder, 1981). If Converse is correct in his assessments of experts and non-experts, only about ten percent of persons will have the expertise necessary to participate in the public sphere and engage in the enlightened, rational discourse as described by Habermas. For the other 90 percent, they are likely ill-suited for participation in a public sphere requiring informed, rational discourse. Not only would they not bring sufficient knowledge into the debate, but according to information processing theory, they would also have difficulty integrating new information, due to poorly developed schemata, and recalling any information presently stored that could contribute to public dialogue. So does this mean debate on public affairs is limited to only ten percent of the population?

Conclusion

The requirement that discourse must be informed and rational to qualify for the public sphere is essential to differentiate between the sharing of rational, informed ideas that could lead to a public policy agenda and mere uninformed gossip. Still, this does not exclude the majority of people from ever participating in the public sphere because the public sphere is not one place, but many, and differing public spheres addressing differing topics will each be open to different participants.

Dahlgren also explores the question of multiple public spheres when he writes:

> Now, few would argue that everyone should or even can always participate in the same societal conversation, and it may be in part a semantic question whether one argues for a single large pluralistic public sphere which connects many smaller discrete arenas or whether one posits that a multiplicity of many smaller public spheres is what constitutes the public sphere as a whole. Public spheres must arrive partly out of necessity, in response to particular circumstances (1995, p.18).

Research in information processing theory has reported that people are seldom experts in many areas. Rather, they are experts in some areas and non-experts in others. Lau (1986) reports in his research that even within the area of politics, most people are experts only in certain aspects. He theorized that there are four political schemata used by individuals to process political information: issue, personality, group, and party, and that seldom does someone have four well-developed schemata. His research supported his conclusion and further revealed that certain groups are more likely to have certain well-developed schemata. For example, men and the young are more likely to hold well-developed issue schemata. Lau also reports that only 30 percent of those participating in his studies possessed no well-developed political schemata.

What this means for the public sphere is that only a small number of people are going to be sufficiently informed to participate in discourse on politics and public affairs all of the time, but most people will be able to participate some of the time and their ability to participate will be determined by the precise focus of the debate. And, if one conceptualizes the public sphere as multiple places, both physical and virtual, where people can rationally debate various topics of varying magnitude – from global warming to new playground equipment for a nearby park – there are expanded opportunities for public sphere participation.

It is also important to recognize that the public spheres are not isolated; they are part of a greater network and are thus linked to one another. Habermas (1989) wrote of how the coffee houses, individual public spheres, were linked by the newspapers that carried information on the public affairs agendas debated among coffeehouse patrons. So, newspapers have not only helped facilitate communication within the nodes of the network by contributing information useful to the debate, they have also allowed for mediated communication between the various nodes or public spheres.

A modern day example of how newspapers provide mediated communication among public spheres is the example of the relationship between the United States State Department and the New York Times. The State Department places all important information to be disseminated to other public spheres in the New York Times. Stephen Hess of the Brookings Institution writes, "The State Department's paper of record is the New York Times: this means that foreign service officers read the Times first, clip the Times, and circulate the clips, as the do the department's clients, that is, the embassies and foreign ministries," (1996, p.39).

Because discourse within and among the public sphere nodes must be rational and therefore information dense, broadcast media have not displaced newspapers as the best media to link public spheres. Text continues to be the best symbol system for providing highly specific, detailed information on public affairs. But newspapers could find a potential rival in the Internet, another communications technology that also uses text as its primary means of communication. Will the Internet eventually serve as means for linking public spheres? Because the Internet has interactive capabilities, it may serve not only as a link, but also a virtual space for a single public sphere or even multiple spheres, depending on how one wants to conceptualize it.

Growth in opportunities for public sphere participation is vitally important because participation is as an important component of American citizenship. In recent years, Americans have seen less participation in public life, and with that decline in participation has come a loss of trust and loss of a sense of power (Sandel, 1996). He writes there are two concerns presently at the "heart of America's discontent": fear we're "losing control of the forces that govern our lives" and fear "the moral fabric of our community is unraveling around us," (p.3).

Participation in the public sphere is a promising avenue for rediscovery of a public voice and personal power over outside forces affecting people's lives, but as communications technologies and markets expand, linking everyone globally, it becomes harder for individuals to see how their voices can be powerful and significant among so many. Therefore, any conception of the public sphere as a single, global public sphere is a threat to human beings' sense of personal power. But, if people conceive of the public sphere as a multiplicity of spheres addressing public concerns ranging from global to neighborhood, there will be numerous spheres small and specialized enough that most citizens can participate.

A healthy national community, even global community, depends on healthy local communities with thriving public spheres. Sandel accurately summarizes this view when he writes:

> If the nation cannot summon more than a minimal commonality, it is unlikely that the global community can do better, at least on its own. A more promising basis for a democratic politics that reaches beyond nations is a revitalized civic life nourished in the more particular communities we inhabit (1996, p.346).

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Realizing the Potential Marketplace of Ideas: Utilizing the First Amendment to Advance Universal Service & Access to the Internet

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Abstract

In contributing to the policy dialogue concerning the digital divide and 'evolving' universal service, this paper unravels the marketplace of ideas concept and applies free speech theory to the Internet. More importantly, to better understand the expansion of the marketplace of ideas, this paper urges a realization of the technological and cultural aspects of cyberspace, specifically how the Internet manifests postmodern characteristics and expression. Therefore, policymakers may incorporate the First Amendment and free speech principles to ensure that citizens are provided with universal access initiatives and opportunities to participate in new media, thereby increasing the competition of voices and discourses within the marketplace of ideas and communication environments.

Introduction

As we enter the millennium, many believe we are in the midst of dramatic economic, social and cultural changes, exemplified by the emphasis placed on information,[1] global networks,[2] the digital economy[3] and the Internet.[4] With the adoption of cyberspace, the potential for buyers and sellers to conduct electronic commerce (e-commerce) has been heralded and forecasted.[5] The Internet has also been singled out for its ability as a new frontier of expression and liberty,[6] allowing individuals to attain information and knowledge, and pursue forms of social interaction that even emulate community-like behavior.[7] Because of inherent features like user-interactivity, decentralized network structure, digitization[8] and the displacement of geographically-based jurisdictions,[9] the Internet and cyberspace also present myriad challenges for the application and creation of laws concerning privacy,[10] copyright,[11] telephony,[12] and freedom of expression.[13] Thus far, at least in the arena of speech, one may contend that cyberspace has experienced limited government intervention.[14]

But while the Internet may be liberating for many, others are concerned that a substantial portion of the population will not be able to reap the potential benefits of the digital world. Fearful of inequitable access to information, many believe preventive measures need to be taken to encourage access to information and bridge gaps between the information haves and have-nots[15] in the "digital divide."[16]

Solutions to answering complex questions of access in an information society reside partially in legal analysis and social theory.[17] While not commonplace among the contemporary policy dialogue, this paper contends recent freedom of speech jurisprudence serves as a useful dialogue to advance the concepts of universal service and access. In particular, an emerging marketplace of ideas is unfolding in cyberspace, as evidenced by the Supreme Court's first-ever review of the Internet in *Reno v. ACLU.*[18] Such recognition and exploration uncovers how unique the Internet is compared to traditional media and communication environments. After examining the marketplace of ideas, and its inclusion in recent judicial interpretation, the concept will be applied the support universal access to the Internet.

With proficient access and literacy skills, common citizens have an opportunity to become their own town crier and gatekeeper on the Internet. But realizing the potential marketplace of ideas may require a recognition of the technological and postmodern cultural characteristics of cyberspace. In this paper, an exploratory analysis of postmodern theory will be offered that reveals individuals have an unprecedented ability to foster their own expression and cultural environs in cyberspace. Thus, when advancing universal service and access initiatives for the Internet, policymakers should utilize the First Amendment in an affirmative manner that will embrace postmodern tendencies of the Internet and celebrate discourses among as many individuals as possible.

The Marketplace of Ideas

One of the challenges facing Constitutional and freedom of speech scholars is to define and interpret what is meant by our First Amendment: "Congress shall make no law...abridging the freedom of speech."[19] Unfortunately, there are no clear cut answers to such a question, only a body of theory and jurisprudence which has been developing for centuries. Although divergent beliefs exist, many scholars agree that freedom of speech is an important underpinning and vehicle for decision making in the democratic political process. Within the 20th century, the classic marketplace of ideas theory has risen and taken center stage.[20] The following pages provide discussion of this laissez-faire approach to free speech theory and supply grounding to examine its presence in recent litigation involving the Internet and its value to universal service policy.

One of the key works on freedom of expression is poet John Milton's 1644 work *Aeropagitica*.[21] Milton, concerned with the evils of licensing and censorship, meticulously refuted the power of government officials to pre-approve all written materials before they were published and disseminated to citizenry within the borders of England.

Milton relied on two essential points against licensing. First, by making material available to citizens, individuals can become more educated, and by sorting out right and wrong in their own minds, they may ultimately find the truth. However, this truth-seeking process may be severely impaired if citizens are unable to hear all points of view — a likely outcome of any licensing or censorship. Second, Milton believed that the most fundamental right we have is liberty: "give me liberty to know, to utter, and to argue freely according to my conscience, above all liberties."[22]

Throughout his work, Milton explored the benefits of what is known today as "the self-righting principle." Milton contended we must tolerate opposing viewpoints even if it goes against the beliefs of our government. If we allow false points of view, it only reaffirms the truth. Additionally, under a licensing scheme, if we believe something is correct, when in reality it is false, we may never know the actual truth. Milton sincerely believed that our government and citizens are only more powerful if there is a healthy and well-informed debate, something which would be impossible under licensing of the press.

In one instance, Milton proclaimed God intended to make man capable of his own decisions:

> For those actions which enter into a man, rather than issue out of him, and therefore defile not, God uses not to captivate under a perpetual childhood of prescription, but trusts him with the gift of reason to be his own chooser.[23]

As expressed above, Milton believed man possesses the liberty and intellectual capacity to determine what is right and wrong and what course of action is proper and improper. God does not hold a tight reign over man like a parent holds over a child. In order to make well-reasoned decisions, man must be free to discover the truth and receive all types of viewpoints on all types of issues. Even if licensing were allowed to shape decisions for mankind, Milton believed licensors themselves would probably be corrupt and err in their judgments. Most of all, licensing would deprive the rest of the country of individual liberty.

Milton believed man should have the liberty to determine which speech is false and which speech is true. In his eyes, truth is more likely to arise out of unfettered discussion than out of repression. This "self-righting principle" and emphasis on truth is an undercurrent to the marketplace of ideas theory.

John Stuart Mill complements the 'self-righting principle' in his fundamental work *On Liberty*,[24] in which he philosophically explored the liberty of individuals to have freedom of thought, opinion and action in society. Mill expanded upon Milton's idea of the importance for individuals to make their own decisions and search for truth without governmental interference.

Mill attempted to discover the proper societal (collective) interests over the individual as related to action. He purported a "very simple principle" of self-protection as the determinant for the limit of government intervention.[25] Societal interference is justified in private, individual affairs to prevent harm to others (the collective). In other words, when individual action jeopardizes the safety and well-being of another citizen(s), government can justifiably step-in and play referee. Although his argument, on the surface, seemingly called for a paternal hand of strong guidance and oversight by government, including that of the press, Mill believed strongly in the freedom of thought and opinion of individuals.

To bolster his argument for freedom of thought and opinion, Mill cited three dangers to the suppression of opinion. First, suppression of opinion may blot out the truth, even if the opinion in question is conventionally far-fetched. Second, there is no harm in hearing and refuting a false opinion; instead, it can only strengthen truth, convictions and conduct. Third, no opinion, no matter how outrageous or correct, is completely true or false. Partial truths from opinions may be useful to develop intellect, improve truth and, consequently, individuals may make better decisions about their individual and collective actions. Mill makes a compelling case for freedom of thought and opinion when he writes:

> Not the violent conflict between the parts of the truth, but the quiet suppression of half of it, is the formidable evil; there is always hope when people are forced to listen to both sides; it is when they attend to only one that errors harden into prejudices, and truth itself ceases to have the effect of truth by being exaggerated into falsehood.[26]

Mill's point is that there is much to be valued and learned when citizens are free to educate themselves and discover truth. The only way this is possible is for government (the collective) to have no control on freedom of thought and opinion.

Mill believed individuals should cultivate themselves — their personality, decision-making skills, morals, diversity, etc.— because he saw this as an important characteristic for the progress of the state. In particular, Mill devised two maxims to apply his theories:

> First, that the individual is not accountable to society for his actions in so far these concern the interests of no person but himself. ... Secondly, that for such actions as are prejudicial to the interests of others, the individual is accountable and may be subjected either to social or to legal punishment.[27]

Mill supplied three objections to governmental interference that fall outside of liberty: individuals can do better than government; individuals might not make the better decisions than government, but it is a valuable thought process and educational experience for them; and lastly, perhaps the action to be taken will only strengthen the already strong powers of government. In addition, Mill thought that a government which does too much for its citizens is doing a disservice, not a service, "the worth of a State in the long run, is the worth of the individuals composing it."[28]

Undoubtedly, Mill's work attempts to bolster individual expression and freedom of thought and opinion. Society is better off in an arena that allows citizens to choose and process what they want to read and hear because it expands their own capabilities and understanding of the world around them, thereby increasing their decision-making skills and curiosity for truth.

Both Mill and Milton's endorsement and rationale for liberty of thought and expression provided a basis for Oliver Wendell Holmes's theory, whereby truth will prevail among unfettered speech in the marketplace. Holmes, a former Supreme Court justice, brought us the "marketplace of ideas" theoretical basis to the First Amendment in a dissenting opinion in *Abrams v. United States*.[29]

It was in *Abrams* that "Holmes began to consider and to discuss the implications of the congressional legislation (of sedition)."[30] Whatever his intentions, Holmes's dissenting opinion in *Abrams* demonstrates the classic marketplace of ideas theory:

> To allow opposition by speech seems to indicate that you think the speech impotent ... When men have realized that time has upset many fighting faiths, they may come to believe even more than they believe the very foundations of their own conduct that the ultimate good desired is better reached in the free trade of ideas — that the best of truth is the power of the thought to get itself accepted in the competition of the market, and that truth is the only ground upon which their wishes safely can be carried out. That at any rate is the theory of our Constitution. It is an experiment, as all life is an experiment. ... I think we should be extremely vigilant against attempts to check the expression of opinions that we loathe and believe to be fraught with death.[31]

Thus, under the classic marketplace of ideas theory, the responsibility of government is to keep its hands off speech, because the market of political ideas and speech will self-correct and sustain itself. Holmes's theory is more or less a laissez-faire notion.[32] Only under a clear and present danger will governmental intervention on freedom of speech and political thought be allowed, and only to a minute degree.

In his dissent and clarification of the clear and present danger test, Holmes espoused that a free exchange of ideas in the market will lead to truth (the self-righting principle). Today, his theory is supported by the proliferation and ubiquity of media and outlets for expression, as citizens have plentiful sources of outlets then ever before, including the Internet, through which unfettered exchange of truth may take place. His theory also led the way for new discussions, interpretations and applications of First Amendment law and theory.

Access Theory: Correcting Failure in the Marketplace of Ideas

But in markets, inaccessibility and competition may be ruthless — even among ideas. Legal scholars Jerome Barron and Owen Fiss contend market failure exists in the Holmesian free exchange and trade of ideas.[33] The term market failure refers to an economic concept relating to outcomes of a market under a free enterprise system. Governmental intervention is warranted only when the market is unable to maximize public utility. In theory, markets in fact do not fail; rather, people do not like the outcomes of a market (i.e., the problems which may result from monopoly power and abuses).[34] Today, it is a common occurrence for government to regulate markets to protect the consumer and public from undesirable market outcomes in telecommunications and other sectors, even in matters relating to speech. Barron and Fiss wish to correct the inadequate outcomes that occur in an unfettered marketplace of ideas.[35]

For Barron, the outcome of the mass media marketplace is problematic. He believed newspapers failed to carry wide-ranging viewpoints and quality of debate on political issues. Because not every citizen has the capital and resources to own a printing press and compete with a major daily, Barron called for the First Amendment to play an affirmative role, guaranteeing citizens and minorities a right of access to city dailies.[36] Barron was concerned not only with newspapers, but also with the concentrated power that existed within the mass media and advocated the practice of the fairness doctrine in broadcasting.[37]

In Barron's view, the mass media had become usurped to influence and structure narrow public debate. Case law, such as *New York Times v. Sullivan* [38] and Holmes's marketplace of ideas offered the mass media powerful editorial control. Barron explained the problem with public debate as disseminated by the mass media:

> To those who can obtain access to the media of mass communications first amendment case law furnishes considerable help. But what of those media whose ideas are too unacceptable to secure access to the media? To them the mass communications industry replies: The First Amendment guarantees our freedom to do as we choose with our media. Thus the constitutional imperative of free expression becomes a rationale for repressing competing ideas.[39]

An overriding concern for Barron was the that fact the mass media were becoming too influential in the lives of Americans and the marketplace of ideas. With the shrinking number of competing dailies and the limited number of broadcast stations, Barron believed mainstream ideas, not diversity, were well represented.

Barron's right of access received affirmation and reached its high-water mark with the Supreme Court's upholding of the fairness doctrine[40] in *Red Lion Broadcasting v. FCC*.[41] Barron himself argued for access and right of reply to newspapers in *Miami Herald v. Tornillo*.[42] Despite his efforts, the Court upheld the editorial control and discretion of the press by refusing to issue a right of reply mandate in *Tornillo*. Over time, the FCC repealed the fairness doctrine for its lack of success in bringing controversial issues to the table and its conflict with the First Amendment and public interest.[43] Despite the repeal of the fairness doctrine, Barron's access theory — that our First Amendment should take an active role in fostering the quality of public debate in the mass media — remains a valuable rebuttal to the marketplace of ideas theory .

While Barron encouraged the First Amendment to be used as an access vehicle for viewpoints in the mass media, Fiss advocated his "public debate principle."[44] Fiss was worried about the distortion of public debate that can occur when social power is distributed unequally. Fiss recognized Harry Kalven's Free Speech Tradition, whereby by the First Amendment protects autonomy, acting more or less like a shield around the street corner speaker.[45] With this autonomy present, the purpose of free speech is to preserve democracy and be "a means or instrument of collective self determination."[46]

But Fiss saw the costs of upholding autonomy in the modern state of mass media and society jeopardizing public debate because of the scarcity of outlets (street corners):

> I think it is fair to say that in a capitalist society, the protection of autonomy will on the whole produce a public debate that is dominated by those who are economically powerful. The market—even one that operates smoothly and efficiently—does not assure that all relevant views will be heard, but only those that are advocated by the rich, by those who can borrow from others, or by those who can put together a product that will attract sufficient advertisers or subscribers to sustain the enterprise.[47]

To correct the marketplace of ideas, Fiss, like Barron, believed the government should play an active role in ensuring robust public debate. After all, Fiss believed editorial and programming decisions have "little to do with the democratic needs of the electorate."[48] For Fiss, this meant organizations like CBS would have to give up part of their own autonomy. In theory, Fiss contended that the laissez-faire market of speech was inconsistent with government's role in regulating other economic markets. Not only was his "public debate principle" a way to ensure public debate, but it also served to abate another of Fiss's concerns — finding support to curtail the deregulatory trend of the 1980s.[49]

Together, Barron and Fiss advocated along similar lines by attempting to correct the ill-fated outcome of the marketplace of ideas. Whether by encouraging the press to provide a wider array of viewpoints, or by allowing the government to decide what was missing on CBS, both advocated the fostering of public debate. While espoused before the advent of the Internet, their theories request the First Amendment to play an affirmative role in public debate, something which was viewed as relevant and pertinent to the powers of the modern electronic mass media.

Marketplace of Ideas Revisited: Courts Find New Competition Exists on the Net

One may ponder whether or not ideas are truly competing in today's media marketplace. For instance, those who do have access to the Internet may have a comparative advantage for expressing their own ideas to compete among a vast array of content. Recently, while ruling on the constitutionality of the Communications Decency Act (CDA),[50] courts pondered this very issue. Throughout the litigation, the courts elaborated on the tensions that exist within a marketplace of ideas, and as well articulated liberating visions and ideals about the potential of the Internet.

Before the three-judge panel could listen to arguments and properly evaluate the CDA, the parties and judges agreed to evidentiary hearings regarding the evolving and expanding world of cyberspace. Besides testimony from various experts and government officials, hearings included a live demonstration of the Internet.[51] Upon consideration of testimony and argument, the panel rendered an extensive, detailed findings of fact in its opinion. Upon further analysis, the findings of fact support many of the notions and elements of a modern marketplace of ideas.

The panel suggests that cyberspace is a new medium, capable two-way communication of text, video and sound among its self-determining users. The Internet governs itself, as control is decentralized among its users: "no single entity — academic, corporate, government, or non-profit — administers the Internet."[52] The panel determined the World Wide Web (WWW) "was created to serve as a platform for a global, on-line store of knowledge, containing information from a diversity of sources and accessible to Internet users around the world."[53] Thus far, the WWW has become a popular and successful vehicle for "research, education, and political activities"[54] and to the panel's purpose of review, a vehicle as well for the distribution of sexually explicit material.[55] Overall, the Internet contains a myriad of viewpoints. "It is no exaggeration to conclude that the content on the Internet is as diverse as human thought."[56]

Because of the technology and decentralized control of the Internet and its relatively low barriers to entry, diversity of content is promoted and encouraged. The panel elaborates on this principle:

> The start-up and operating costs entailed by communication on the Ineternet are significantly lower than those associated with use of other forms of mass communication, such as television radio, newspapers and magazines.[57]

The panel believes disseminating material on the Internet is also easy and relatively inexpensive[58] for speakers to reach large audiences. "Individuals have a wide variety of avenues to access cyberspace in general, and the Internet in particular."[59] Users may obtain access to the Internet publicly through a library or school, or from home through their own initiatives and resources.[60] These low barriers to entry and ease of access encourage non-profit organizations and citizens to communicate their messages and add to public debate. By typing key words into search engines like Altavista, and through the use of hypertext (point-and-click ability) on the WWW, individuals may quickly locate public information from around the globe.[61] In addition, the technological features of cyberspace, where chat rooms, e-mail, and newsgroups are interactive and prevalent, provide opportunities for individuals to speak and listen to one another.[62] Thus, users may have discussions with other people and may even create "'virtual communities' that stimulate social interaction."[63]

In addition to finding the Internet to be a diverse and democratic carrier of information, the panel contends "communications over the Internet do not 'invade' an individual's home or appear on one's computer screen unbidden"[64] In fact, rarely do images appear accidentally; rather, "the receipt of information on the Internet requires a series of affirmative steps more deliberate and directed than merely tuning the dial."[65]

The panel's findings of fact contain significant threads of the marketplace of ideas and access theories of the First Amendment. The panel is undoubtedly impressed by the diversity of views and voices on the Internet. Individuals don't have to own their own a printing press or station to disseminate and publish information electronically. With comparative ease and access, a large spectrum of issues and material is available on the Internet. In theory, the marketplace of ideas and "self-righting principle" is fostered in cyberspace, as truth will be found among diverse, competing viewpoints and ideas.[66]

Perhaps even more telling then the findings of fact, is the opinion of *ACLU v. Reno*. After quoting Holmes's "free trade of ideas" theory in *Abrams v. United States*,[67] Dalzell explores the arguments that were raised by Baker in *Miami Herald v. Tornillo*.[68] In essence, Dalzell provides Baker's and Fiss's arguments of market failure. The outcomes of the modern mass media market are dominated by consolidation and a few deep-pocketed players, and, as a result, do not offer diverse viewpoints. Despite the market failure arguments being raised in *Turner v. FCC*[69] and *Tornillo*, the Supreme Court upheld the First Amendment and editorial right of cable operators and newspapers. Dalzell concludes these cases demonstrate "the cure for market dysfunction (government-imposed, content-based speech restrictions) will almost always be worse than the disease."

According to Dalzell, the solution to the failed outcomes of the marketplace of ideas lies within the Internet. "The Internet has achieved the most participatory marketplace of mass speech that this country — and indeed the world — has yet seen." Dalzell's uncompromising support for a Holmesian marketplace is demonstrated by his striking assertion of government's mishandling of speech in cyberspace:

> The Government's asserted failure of the Internet rests on the implicit premise that too much speech occurs in that medium, and that there is speech too available to the participants. This is exactly the benefit of the Internet.[70]

Dalzell suggests the Internet is the solution to the worries and harmful effects of a commercialized mass media concerned with bottom lines and profit margins. Barron's and Fiss's theories are thereby supplanted, as Dalzell offers the Internet as a medium that has the potential to finally achieve a truly diverse marketplace of ideas. For Dalzell, stimulating access and public debate is not an issue on the Internet as it is in the arena of traditional mass media. After all, conglomerates do not own and control cyberspace as they do within the newspaper and broadcasting industries. Instead, the Internet is more or less controlled by individual users who, in effect, replicate an unfettered marketplace of ideas.

The panel believes the elements of democratic participation, access, liberty, self-fulfillment and free expression are prevalent throughout cyberspace. In the panel's strongest endorsement of the Internet, Judge Stewart Dalzell describes the promise and guarantees of the First Amendment in cyberspace:

> The Internet may be regarded as a never-ending worldwide conversation. The Government may not, through the CDA, interrupt that conversation. As the most participatory form of mass speech yet developed, the Internet deserves the highest protection from governmental intrusion. ... Just as the strength of the Internet is chaos, so the strength of our liberty depends upon the chaos and cacophony of the unfettered speech the First Amendment protects.[71]

Unanimously, the panel attempts to derail the patently offensive and indecency provisions of the CDA from ever becoming reality. In the process, it discovered that there is something entirely different about the Internet from other media.

The Supreme Court affirmed the district court's ruling, echoing many of the panel's sentiments on cyberspace's unique ability to foster more speech.[72] By contending that the prevalence of pornography is steering citizens and their children off of the information highway, the Court believed the government failed to recognize the new opportunities the Internet affords. Justice Stevens, with specific reference to the marketplace of ideas, elaborates on such shortsightedness:

> The dynamic expansion of this new marketplace of ideas contradicts the factual basis of this contention. The record demonstrates that the growth of the Internet has been and continues to be phenomenal. As a matter of constitutional tradition, in the absence of evidence to the contrary, we presume that governmental regulation of the content of speech is more likely to interfere with the free exchange of ideas than to encourage it. The interest in encouraging freedom of expression in a democratic society outweighs any theoretical but unproven benefit of censorship.[73]

In essence, because the CDA is not sufficiently tailored to meet a compelling government interesting in shielding minors from indecent and patently offensive speech, the Court found the provisions would unnecessarily hinder the Internet's ability to expand the marketplace of ideas. If the CDA was left intact, adult speech in this new medium would be restricted to what was deemed appropriate for minors (those under 18 years of age). More importantly, a precedent of constraining the free trade of ideas would be established in cyberspace, thereby potentially discouraging users from participating on the Internet.

Like its predecessor, references to the marketplace of ideas are also abound throughout *Reno v. ACLU*. To establish grounding for their review,[74] the court explained the exponential growth of the Internet, both in terms of host computers and users,[75] and the various applications and characteristics of e-mail, listservs, chat rooms, world wide web (WWW) and search engines. Impressed especially with hypertext and the WWW, the court surmises that "the web is thus comparable, from a reader's viewpoint, to both a vast library including millions of readily available and indexed publications and a sprawling mall offering of goods and services."[76]

Particularly revealing of a new type of marketplace of ideas, the Court expounds on the publishing opportunities of the Internet:

> From the publishers' point of view, it constitutes a vast platform from which to address and hear from a worldwide audience of millions of readers, viewers, researchers, and buyers. Any person or organization with a computer connected to the Internet can "publish" information. Publishers include government agencies, educational institutions, commercial entities, advocacy groups and individuals. Publishers may either make their material available to the entire pool of Internet users, or confine access to a selected group, such as those willing to pay.[77]

By affording new avenues of discourse, the Court believes the Internet's technological characteristics will increase voices in the free exchange of ideas. Citizens with access to the Internet have numerous possibilities to retrieve and even publish information. Theoretically, individuals may resort to their own liberty to sort out truth from the plethora of information and material that exists in cyberspace's marketplace of ideas.

The majority in *Reno v. ACLU* believes cyberspace may be distinguished from the scarcity and pervasiveness rationales used to justify the regulation of broadcasting in *Red Lion* and *Pacifica.* The Court finds cyberspace to be fundamentally different than broadcasting because it is not constrained by scarcity nor in need of taming because of its alleged pervasiveness. Justice Stevens expands upon the unique application characteristics of cyberspace:

> Unlike the conditions that prevailed when Congress first authorized regulation of the broadcast spectrum, the Internet can hardly be considered a "scarce" expressive commodity. It provides relatively unlimited, low-cost capacity for communications of all kinds. ... This dynamic, multifaceted category of communication includes not only traditional print and news services, but also audio, video, and still images, as well as interactive, real-time dialogue. Through the use of chat rooms, any person with a phone line can become a town crier with a voice that resonates farther than it could from any soapbox. Through the use of Web pages, mail exploders, and newsgroups, the same individual can

> become a pamphleteer. As the District Court found, "the content on the Internet is as diverse as human thought."[78]

In its flat out denial of scarcity, the Court strongly endorses the Internet's democratic and speech-enhancing qualities. Relatively low barriers exist to participate in cyberspace, as citizens do not necessarily need to own or operate a station or newspaper to make a contribution to the marketplace of ideas. While not as easy "a phone line," the resources needed to become a voice in cyberspace are small when compared to traditional media. Given its strong endorsement of the Internet's ability to eradicate scarcity, the Court would probably find Barron's and Fiss's arguments of market failure in traditional media to be irrelevant in cyberspace.[79] Instead, as alluded to earlier, the Court finds the Internet as a "dynamic expansion" of "the marketplace of ideas,"[80] one which provides dramatic expansion to individual self-fulfillment and diversity of content.

Upon recent passage of the Child Online Protection Act (COPA),[81] what many refer to as CDA-II,[82] parties led by the ACLU challenged the constitutionality of the provisions. In granting a preliminary injunction against the enforcement of COPA, the district court embraced many of the earlier sentiments expressed in the CDA-rulings.[83] Judge Lowell A. Reed, Jr. acknowledged many of the difficulties of unconventional speech from reaching the masses in traditional media compared to the Internet. "In the medium of cyberspace, anyone can build a soapbox out of web pages and speak her mind in the virtual village green an audience larger and more diverse than any other framers could have imagined."[84]

Upon appeal, the Third Circuit recently upheld the district court's injunction finding COPA to be misconstrued for the Internet by relying on community standards to determine what is considered speech that is "harmful to minors."[85] "The Supreme Court has already noted that because of the peculiar geography-free nature of cyberspace, a 'community standards' test would essentially require every Web communication to abide by the most restrictive community's standard."[86] Thus, the inability of websites to restrict access based on a given user's geographic locale imposes an "impermissible burden on constitutionally protected First Amendment speech."[87]

While the battle continues to be waged in the courts and Congress, thus far the CDA and COPA litigation demonstrates an apparent endorsement of the marketplace of ideas theory as applied to the new medium of the Internet. The Supreme Court found "the breadth of the CDA's coverage to be wholly unprecedented"[88] and a constitutional infringement on the rights of adults to access and disseminate indecent and patently offensive material. Most of all, such regulations impinge on individual liberty embedded in the Holmesian notion of trading ideas in search of truths — even if those truths are related to adult-oriented content. In addition, the findings of fact and opinions embrace cyberspace's potential to provide a platform for a plethora of speakers as compared to traditional media outlets.

Potential abundant exchange within the Marketplace of Ideas on the Net

With tremendous foresight, political science and legal theorist Ithiel de Sola Pool wrote about the promise of new technologies more than fifteen years ago before the Internet and technological convergence emerged as trends. He envisioned networked computers to be the "printing presses of the twenty-first century,"[89] contending that many forms of traditionally published material would be disseminated digitally via computers and electronic networks. Overall, he foresaw the potential and growth of new technologies:

> The technologies used for self-expression, human intercourse, and recording of knowledge are in unprecedented flux. A panoply of electronic devices puts at everyone's hand capacities far beyond anything that the printing press could offer. Machines that think, that bring great libraries into anybody's study, the allow discourse among persons a half-world apart, are expanders of human culture. They allow people to do anything that could be done with communications tools of the past, and many more things too.[90]

To liberate new digital frontiers, Pool outlined a set of principles to instill the highest amount of freedom of speech for electronic communication technologies. Fundamentally, he contended the "First Amendment applies fully to all media (both electronic & print)." In addition, "anyone may publish at will" without the threat of prior restraint. Regulation to curtail freedom of speech should only be a "last recourse" because "in a free society the burden of proof is on the least possible regulation of communication." Common carriers must be required to interconnect and, like government, should not be concerned with what content is carried on their networks.[91] While advancing these principles for freedom, Pool was also hopeful that these technologies would play their own natural advocacy role and resurrect free communication.

He is not alone in his belief. In addition to the judicial optimism apparent in the review of the CDA and COPA, many modern theorists also believe new technologies have the potential, if regulated properly, to bring new fruits and freedoms to our society.[92] In order to attain greater interactivity, choice and diversity in debate among citizens, Berman and Weitzner believe new media must also exhibit a certain style of network architecture:

> The scarcity that characterizes today's mass media will be fully replaced by abundance only when a network with the following characteristics is in place: (1) a decentralized, open-access architecture; and (2) open endpoints, providing easy access for all potential content providers and content users.[93]

Besides a decentralized architecture and open interfaces proliferating the number of speakers, users must also rely upon themselves and one another for self-sufficiency. New interactive media differ substantially from traditional mass media because they provide users with greater control mechanisms and choice. These mechanisms, such as filters and rating systems, as well as individual intellect and decision-making, will reduce the rationale for the government to intervene and create intrusive content measures. In addition, by placing the onus on the individual, users may become more motivated to become an active participant in an on-line environment. Nonetheless, if open network architecture and user choice is not adopted to new media like cyberspace, the potential bright future of First Amendment values, including information diversity and public participation, may welter away.

If we are able to successfully implement de Sola Pool's vision and Berman and Weitzner's suggestions, the Internet could be considered to bring about the establishment of a new marketplace of ideas and, add potentially revitalize public discourse, even perhaps the public sphere. In short, the public sphere refers to public life.[94] Such life may include the involvement and participation in matters outside the home and office, public discussion about common concerns and even public spaces that provide congregation and impetus for such activities to occur. In theory, more diversity and public participation will result in cyberspace because of the characteristics of user choice and interactivity, thus leading to the establishment of new virtual spaces of discourse and public involvement. At the very least, with access and training, individuals may create their own electronic printing presses through the construction of Web pages, and communicate information to others via e-mail, Listservs, Usenet groups, and IRC. In other words, individuals would not be limited to only material that existed within the traditional mass media marketplace. With interaction and choice, personal creation and dissemination would be included as valuable pieces of an immense electronic library of information — a radically different marketplace as compared to the past.

Marketplace of Ideas & 'Evolving' Universal Service

Traditionally, marketplace of ideas theory has not been entered into the debate regarding universal telephony service.[95] Even though telephony is considered a two-way, interactive technology, uses of telephony have primarily evolved around the transmission of information, namely conversations between people and not the production and distribution of information that is now capable under the Internet. In addition, First Amendment jurisprudence regarding telephony has been reflected in common carriage, where carriers are considered to be 'neutral conduits,' generally not liable for content.

But because of the expansion options that may result from technologies like the Internet, an evolving concept of universal service may readily incorporate free speech theory to serve as a basis for policy. Policy makers and industry alike have begun to scratch the surface on such potential, in part because of a new Congressional mandate to reexamine universal service in the information age.

Section 254 of the Telecommunications Act of 1996[96] requires the FCC to devise universal service plans and rules for advanced communications, or alternatively, communications that move from plain old telephone service (POTS) to pretty amazing new stuff (PANS). Congress mandates the FCC to define "evolving" universal service by using specific principles and criteria [97] Most importantly, the '96

Act calls for the FCC to form a federal-state joint board to render a new concept of universal service. Section 254 also requires all telecommunication providers to contribute to universal service – historically private carriers and enhanced service providers such as cellular operators and Competitive Access Providers (CAPs) have not contributed to this fund. Once these resources are pooled, only a "qualified carrier" as defined in Section 214 will receive universal service assistance.[98]

When considering universal service, the FCC must examine current and future uses of telecommunication services. In determining the universality of telecommunication services, the Act suggests the FCC to consider whether the services:

- are essential to education, public health, or public safety.
- have, through the operation of market choices by customers, been subscribed to by a substantial majority of residential customers.
- are being deployed in public telecommunications networks by telecommunication carriers.
- are consistent with the public interest, convenience and necessity.[99]

Section 254 not only provides guiding principles to define services, but it also calls for an expedient implementation and periodic review of advanced universal service.[100]

Within in a month of President Clinton signing the bill into law, the FCC issued a Notice of Proposed Rule Making asking for comments on universal service as set out in Section 254 and also appointed a Federal-Sate Joint Board on Universal Service[101] In all, more than 320 public policy organizations, advocacy groups and telecommunications companies filed comments with the FCC.[102]

After the Joint Board released its recommendations,[103] the Commission implemented its policy and legislative mandate through its Report and Order on Universal Service. [104] The Commission determined the following services to be worthy of universal service support: voice grade access to the public switched telephone network (PSTN); touch tone service; single party service; access to emergency, enhanced 911 services; access to operator services; access to inter-exchange services (long distance); access to directory assistance; and Lifeline and Link Up services for qualifying customers.[105] In addition, the Commission stressed that competitive neutrality be adopted to ensure all interstate telecommunication service providers contribute to the advancement and preservation of recommended universal service standards.[106] In revamping subsidization to provide support for local service, the Commission changed the amount Inter-exchange carriers pay through access charges to local exchange carriers, and shifted costs by raising the subscriber line charges on all business and second residential lines.

It should be noted that universal service and universal access in telecommunications really entail two different policies. While the modern notion of universal service means providing a telephone to as many households as possible, universal access is used to "describe the initial stages of telecommunications buildout" with the emphasis on increasing access to "services on a community-wide level."[107] Although Congress and the Commission did not universalize Internet service for the entire public under the '96 Act, their actions nonetheless suggest that the Internet is a valuable resource worthy of universal access, so much so that schools, libraries and health care providers are now eligible to receive a discounted e-rate (20-90%) for connections to the Internet.[108]

Universal service initiatives still needed to address the information gap and access to the marketplace of ideas

The concept of universal service will receive periodic review and evolve, as it moves to from basic wireline access to advance telecommunication services such as the Internet. Today, many of us take basic telephone service as a granted and given, as currently 94.1% of households in the U.S. have telephone service.[109] But even among POTS, great discrepancies between income and access exist. The Center for Media Education reports more than 18 percent of U.S. households at the poverty level continue to live without telephone service, with the level rising to 23 percent among those households with children and income below poverty.[110] According to the Benton Foundation, 43.5 percent of families who depend entirely on public assistance, and 50 percent of households living at or below the poverty line lack telephone service.[111]

Despite the rapid growth of the Internet and World Wide Web (WWW),[112] statistics on Internet usage and access also show that their is a significant gap in the U.S. between non-users and users of the Internet. Only 19 percent of citizens with a high school diploma or less have Internet access, while more than half of those with a college degree utilize the Internet.[113] According to 1997 Census data, 36.6% households own personal computers, 26.3% modems, and 18.6% on-line access; nonetheless, households earning between $5,000-10,000 in rural poor, urban areas and central cities all have on-line access rates below five percent. In addition, white households (40.8%) are twice as likely to own a computer than Black (19.3%) or Hispanic (19.4%) households.[114] In a study critical of the lack of competition and fall in prices as a result of the Telecommunications Act of 1996, disparity of Internet access may also be seen between high and low telecommunication service users, largely reflective of households with different income groups.[115] In addition, those who once had access and drop off from using the Internet, are more likely to be younger, poorer and less well educated than steadfast users.[116]

As Congress and the FCC found Internet usage for schools and students to be an imperative under the '96 Act, public schools connected to the Internet enjoyed a climbed significantly, from 35 percent in 1994 to 89 percent in 1998. [117] As of Fall '98, more than half of instructional rooms in public schools were connected to the Internet. Nonetheless, even despite the proliferation of access, there is a correlation between schools with more minority enrollment and less access, as well as those schools whose students are eligible for free or reduced-price school lunches.[118]

All of the statistics demonstrate an information gap, one where citizens have unequal footing to communicate and receive information. If such trends continue, many believe the current and future potential information gap between the information haves and have-nots will be detrimental to society.[119] Williams believes that if you are unable to have access to a new information resource (i.e., the Internet), "you will be doomed to remain in the underclass of what are otherwise visible affluent societies" [120] especially as information becomes more important for social mobility in the U.S. post-industrial economy. If the gap is not reduced, we will end up having a computer-illiterate workforce, and loose sight of opportunities to level the playing field for students of different socio-economic backgrounds.[121] Instead, only an upper-echelon of society will continue to benefit from the information and efficiency that technology may bring. Continuation of the information haves vs. have-nots trend will likely contribute to greater economic and social inequality.

Many of the same arguments for bridging the information gap are also strong reasons to support universal service . Theoretically, universal service principles generally revolve around the individual, social system and humanity.[122] An argument based on the individual is that universal service "is a basic human right. Every person has a right to these services by the mere virtue of being a citizen."[123] A social system justification may be referred to the network externality argument. The greater number of users there are interconnected to a network, the greater the social and economic value is of that network to both its users and suppliers.[124] As people are added to a telecommunications network callers are able to reach and talk to a greater number of people. Thus, telecommunication services which are available on a universal basis make it possible for our social system to function more cohesively. Likewise, the humanity argument for universal service suggests that telecommunication services bind and unify humans together by providing physical communication links.

Such arguments only strengthen the need to allow citizens to access the emerging marketplace of ideas on the Internet. If we deem the communication and reception of ideas and information to be an integral part to of democracy, and a vital element to participate in the information society, then why wouldn't we want to extend it to a new medium with the potential to be as culturally diverse and liberating as ever before?

Postmodern Expression and the Internet's marketplace of ideas

Even though it may be contentious at times,[125] social theory may offer rich clues and serve as an explanatory tool to describe what may be transpiring in society. Today, many theorists readily agree that we are living in the midst of an information society, in which the flow, communication and acquisition information is a core component of the economy.[126] However, not all would agree that we are living with a postmodern condition. Nevertheless, examining the Internet through a postmodern lens offers interesting cultural insight worthy of exploration, especially in terms of trying to synthesize the Internet in terms of a radically different marketplace of ideas.

Postmodernism[127] refers to the emergent historical epoch in opposition to modernism, often characterized by such words as indeterminacy, dispersal, combination, and anti-narrative.[128] Central to the transformation from a modern to postmodern condition is the shift from the sovereign individual to a fragmented or ever-emergent self.[129] Given such trends, it is not surprising that postmodernity has witnessed a recognition and discovery of the "Other," as evidenced in the work of Foucault,[130] as well as of cultural studies scholars concerned with gender and race representation in the media.[131]

While the Other continues to chart new waters, another avenue worthy of exploration in postmodernity lies within the ever expanding terrain of technological convergence represented by cyberspace. Science fiction writer William Gibson defines cyberspace as:

> A consensual hallucination experienced daily by billions of legitimate operators, in every nation. ... A graphic representation of data abstracted from the banks of every computer in the human system. Unthinkable complexity. Lines of light ranged in the non-space of the mind, clusters and constellations of data.[132]

Unthinkable complexity is one way of characterizing the Internet. Often seen as encapsulating the platform and medium of the future, cyberspace is inherently different from traditional forms of media — newspaper, broadcasting, and cable television — media which are arguably products of modernity. After all, the Internet is mutli-modal in nature, a combination of print, magazine, broadcasting, telephony and data. Two-way communication and interactivity allow those with access the ability to receive and publish material from their keyboards. The control of the Internet is also decentralized, representing a shift from the traditional hierarchical telephone network and information flow typologies of other media. With such new characteristics, one may begin to realize the symmetry which exists between the Internet and postmodernity. The potential for a plethora of diverse voices exists in cyberspace. Because no centralized control exists per se, a multitude of voices often express themselves, even anonymously, through a number of representations, outlets and applications, such as e-mail, IRC (Internet Relay Chat), WWW (World Wide Web) pages, BBS (Bulletin Boards), MUDs (Multi-user domains), and virtual reality.

In fact, the medium of the Internet manifests itself in a postmodern fashion. The discontinuity and amount of information on the Internet provide new possibilities and experiences that often result in empowering the self to become further fragmented or ever-emergent. Likewise, the expression and potential reception of the Other increases.

In describing modernity, David Harvey refers to the words of Baudelaire, noting it "is the transient, the fleeting, the contingent; it is the one half of art, the other being the eternal and the immutable."[133] To Harvey, such principles shows modernism as relinquishing the past and finding meaning "within the maelstrom of change."[134] The Enlightenment period during the eighteenth century welcomed such change and "saw the transitoriness, the fleeting and the fragmentary as a necessary condition through which the modernizing project could be achieved"[135] Principles of liberty, equality, faith in human intelligence and universal reason permeated society. Harvey saw the irony in the opposition between the ephemeral and eternal through the interplay of creativity and destruction:

> If the modernist has to destroy in order to create, then the only way to represent eternal truths is through a process of destruction that is liable, in the end, to be itself destructive of those truths. Yet we are forced, if we strive for the eternal and immutable, to try to put our stamp on the chaotic, the ephemeral, and the fragmentary. The Neitzschian image of creative destruction and destructive creation bridges the sides of Baudelaire's formulation in a new way.[136]

This 'creative destruction' was a tool used by artists to help make sense of the chaos characteristic of the modernist period. Interestingly enough, the idea of creative destruction/destructive creation may be seen as a potential method by which to make sense of and create order for the Internet. The Internet, because of its globalness, digitization and packet-switching characteristics, more or less erodes physical real-world boundaries, making it extremely difficult to apply any existing legal jurisdiction. While virtual communities have found it necessary to create their own rules,[137] thus far the government, artists, and media have been unable to put a stamp on the Internet through creative destruction. So long as control remains widely dispersed, the Internet's postmodern tendencies suggest the medium may resist such a creative destruction from taking place.

Harvey believes we have transited from a modern to postmodern condition. While modernism attempted to transcend and counteract the 'eternal and immutable' elements of the ephermerality and fragmentation, "postmodern swims, even wallows, in the fragmentary and the chaotic currents of change as if that is all that there is."[138] In addition, "the idea that all groups have a right to speak for themselves, in their own voice, and have that voice accepted as authentic and legitimate is essential to the pluralistic stance of postmodernism."[139] In many ways, the number of webpages and e-mail addresses in cyberspace continue to expand and grow in connected, yet fragmented segments, as it is increasingly harder to catalog and local information on search engines. With the outgrowth of ISPs (Internet Service Providers) and new access initiatives in schools and libraries, more voices are gaining a presence on the Internet (although there is a long way to go to achieve equitable access, both domestically and globally). Thus, the Internet may be seen as swimming in fragmentary change while providing new opportunities for groups organizations and individuals to express themselves.

Concerned with critiquing assumed order and representation, Foucault warned against the limitations of modern language and culture. Before the 17th Century, order was constructed through resemblance — convenience, emulation, analogy, sympathy — all of which were grounded upon signatures. Semiology and hermeneutics were interwoven into the resemblances of objects are they are perceived; however, this interwoveness disappeared after the Classical Age. The role of language changed from describing what is before you to handling concepts as if they were neutral and transparent. Referring to classification methods of science, Foucault elaborates on the transformation:

> Every being bore a mark, and the species was measured by the extent of a common emblem. So that each species identified itself by itself, expressed its individuality independently of all others...but, from the seventeenth century, there can no longer be any signs except in the analysis of representations according to identities and differences. That is, all designation must be accomplished by means of a central relation to all other possible designations. To know what properly appertains to one individual is to have before one the classification — or the possibility of classifying — all others.[140]

Disheartening to Foucault is what happens when something doesn't fit neatly into any of the classifying criteria. The Other may become lost or misrepresented because language has become transparent and lost its descriptive role. Thus, discourses or discursive practices may set rules as to what is legitimized and what is cast into the eclipse. Foucault, saw the postmodernism movement as a realization of how modern notions of reason, as evidenced by law, science and philosophy, may by their very nature, ignore the Other.

While the demographics of users may be critiqued, Foucault would nonetheless be encouraged by the Otherness that is represented on the Internet. The diversity of content available is far beyond the limiting discourses of the Enlightenment and science. Moreover, the lack of order generally displayed in cyberspace lends even greater support to Foucault's overall implicit argument that we take order for granted as a given; instead, each culture may create its own order. Netizens in cyberspace are engaged in constructing and sorting out order through an abundance of information and voices. What's unique about the new order, however, is that many of the modern and land-based elements of law and reason aren't transparent or easily applicable in cyberspace. Rather, the Internet may be thought of as a pluralistic medium, one potentially encapsulating all of us as individuals.

Conclusion: New set of principles needed to access the Net's marketplace of ideas

The preceding discussion has attempted to unravel the marketplace of ideas theory and demonstrate how it may be readily transferred to the Internet as illustrated by the Communications Decency Act (CDA) litigation. Through its affirmation of the district court's findings on fact on the Internet, the Supreme Court discovered that cyberspace is much more than just a new vehicle for mass communication. Technological characteristics such as interactivity, low barriers of entry and decentralized network structure represent significant departures from prior media, and more importantly a liberating arena for the free exchange of ideas.

But as demonstrated there is something even greater than the legal visions of a new marketplace of ideas. If one begins to cast the Internet as a reflection of a postmodern medium than one may ponder the potential that exists for expression and consequently, its implications for 'evolving' universal service policy. The main point of this exercise is to illustrate that the Internet is truly unique it is ability to foster and recognize postmodern expression. In other words, the Internet's initial, inherent cultural tendencies demonstrate an uncanny power to recognize individuals and marginalized voices that have been absent participants in passive, one-way media.

Besides revealing the diversity of cultural expression that's possible in cyberspace, postmodernism may also be a template to view the ambiguities surrounding the creation and enforcement of laws and norms to the Internet. The CDA is one among many examples of the difficulties of applying law to an international medium in which its users and technological features create its own virtual rules and borders. Traditional laws are met with tremendous resistance from users throughout the cyberspace community.[141] Even without this resistance, many legal experts contend physical, real-world laws do not easily apply to a medium which knows no bounds or borders.[142] Thus, one must be careful in transferring and applying exisiting laws and norms to a medium like the Internet.

Notwithstanding, the First Amendment, itself, a byproduct of the Enlightenment and modernist project, may be used to combat policy dilemmas that arise in a postmodern medium, including access initiatives for new media. Allowing as many voices as possible on the Internet, though, will more than likely require a paradigm shift. To begin with, new malleable parameters for policy must recognize users and borders as ever-emergent. Terms to characterize the new “Internet as paradigm”[143] may include: network of networks, infostructure, multimedia, access, amplify, accelerate, empower, distribute, connectivity, disintermediate, incubation, possibilities, resilience, adaptive, robust, open, decentralized, participatory, pluralism, diversity, interactive, personalized, self-organizing, [144] ever-emergent and marketplace(s) of ideas.

Conceptualizing an 'evolving' universal service policy should account for the positive attributes that a postmodern condition offers in cyberspace. Because of its decentralized control, two-way interactivity, low barriers to entry, ability to eradicate physical borders and tendency to simulate participation among persons with diverse opinions, the Internet may be seen as the embodiment of the ever-emergent self, and therefore a new marketplace of ideas. As the terrain and scope of cyberspace increases (some portend it to be the 'killer application' or 'platform of the future') representation of the Other should rise significantly. With greater representation of the Other, a dynamic expansion of the marketplace of ideas and public sphere may occur, especially if citizens are afforded access opportunities to remedy the current information gap. The First Amendment should be utilized to maintain such a prognosis and consequently must be at the forefront to capture the cultural potential of cyberspace.

Access to the new marketplace of ideas as a basic tenet of 'evolving' universal service

> Cyberspaces are populated by people-to-people communication including person-to-person, some-to-some, and many-to-many. Computer mediated communication offers an environment unlike any heretofore made available, with the potential for genuinely interactive and cooperative innovation. To saddle such promise with an overload of baggage from a bygone era would be tragic.[145]

A bygone era would be to continue to conceptualize of universal service as a way to only advance access to the telephone. Instead a recognition of the value of individuals being able to both express and receive information must be at the forefront of new universal service initiatives for the Internet.

As demonstrated through postmodernism, one may begin to see how different the world of cyberspace is compared to traditional media and its respective cultural uses. Transferring those differences is not an easy task. Arguably the communication of mediated expression has a pervasive presence in our lives, and as the information economy grows, many citizens will learn how to better utilize information. But more importantly, if policy proceeds correctly, the general public may also have an unprecedented opportunity to express ones views in a truly rich marketplace of ideas, as evident from understanding the initial cultural signs of cyberspace.

Recognizing access and expression to the emerging marketplace of ideas will not solve all societal ills. Admittedly, problems will arise in a competitive marketplace of ideas, just as they do in any market. Issues pertaining to education, literacy, commercialization and interconnectedness will need to be confronted. But bridging the information gap and extending the Internet to as many citizens as possible will provide everyone with a voice that recognizes the potential expressive capabilities of the Internet, as evidenced by freedom of speech and postmodern theory. Utilizing the First Amendment in a manner that allows individuals to choose when, what, why, where and how they enter into interactive discourses is radically different and beneficial direction for policy makers to adopt. Policymakers have an opportunity to rely upon free speech principles to help create a basis for 'evolving' universal service policies that will establish a more equitable marketplace of ideas and enhance communication within our society.

Endnotes

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[1] See FRANK WEBSTER, THEORIES OF THE INFORMATION SOCIETY 6-29 (1995) (exploring the five analytical dimensions of the information society: technological, economic, occupational, spatial, and cultural).

[2] "A technological revolution, centered around information technologies, is reshaping, at accelerated pace, the material basis of society. Economies throughout the world have become globally interdependent, introducing a new form of relationship between economy, state and society, in a system of variable geometry." MANUEL CASTELLS , THE RISE OF THE NETWORK SOCIETY 1 (1996)

[3] See generally, DON TAPSCOTT, DIGITAL ECONOMY: PROMISE AND PERIL IN THE AGE OF NETWORKED INTELLIGENCE 43-68 (1996) (offering an overview of some of the core themes that comprise a digital economy).

[4] For a review of the how the Internet works, see Adam Giffin, EFF's Guide to the Internet, v. 3.20 (visited Dec. 1, 1999) <http://www.eff.org/pub/Net_info/EFF_Net_Guide/netguide.eff>

[5] See e.g., U.S. DEP'T OF COMMERCE. THE EMERGING DIGITAL ECONOMY II (1999) (part of a series of annual reports that provides an analysis of the issues facing e-commerce, including current growth statistics and future economic projections).

[6] See e.g., MIKE GOODWIN, CYBER RIGHTS: DEFENDING FREE SPEECH IN THE DIGITAL AGE, 3-24 (1998).

[7] See generally, SEVEN JONES (ED.), CYBERSOCIETY 2.0: REVISITING COMPUTER MEDIATED COMMUNICATION AND COMMUNITY 1-68 (1998).

[8] See pages 11-16 of text describing findings of fact and opinions regarding the litigation of the Communications Decency Act.

[9] See David R. Johnson and David Post, Law and Borders — The Rise of Law in Cyberspace, 48 STANFORD L. REV. 1367 (1996).; Lawrence Lessig, The Zones of Cyberspace, 48 STANFORD L. REV 1403, 1406 (1996).

[10] See Joel Redidenberg, Restoring Americans' Privacy in Electronic Commerce, 14 Berkeley Tech. L.J. 771 (1999).; Federal Trade Commission, Self-Regulation and Privacy Online: A Report to Congress (July 1999) (visited October 26, 1999) <http://www.ftc.gov/os/1999/9907/pt071399.htm>

[11] See Digital Millennium Copyright Act, Pub L. No. 105-304, Sec. 201-03, 112 Stat. 2877 (1998), (codified at 17 U.S.C. § 512).; Karen Rupp-Serrano, Copyright and Fair Use: A Policy Analysis, 14 GOV. INFO. QUARTERLY 155 (1997).; Matt Jackson, Linking Copyright to Home Pages, 49 FED COMM L. JOUR. (1997); Stephen Cooper, Common Law and Privacy in Computer-Mediated Environments 5 NEW JERSEY JOUR OF COMM. 167 (1997).

[12] Internet Telephony uses the technology of packet switching and often circumvents traditional end-to-end routing, access charges and universal support mechanisms associated with the public switched telephone network (PSTN). See Robert Frieden, Dialing for Dollars: Will the FCC Regulate Internet Telephony? 23 RUTGERS COMP.& TECH. L. J. 47 (1997).

[13] See Reno v. ACLU, 521 U.S. 844 (1997) (finding federal law restricting the transmission of indecent and patently offensive material to those under 18 years of age to be unconstitutional).; American Civil Liberties Union, 451.2: Is Cyberspace Burning? How Rating and Blocking Proposals May Torch Free Speech on the Internet, (visited Oct. 16, 1999)

<http://www.aclu.org/issues/cyber/burning.html> (contending that the use of filters and rating systems on the Internet are inefficient and end up blocking material that is not objectionable).

[14] See generally, LAWRENCE LESSIG, CODE AND OTHER LAWS OF CYBERSPACE (1999).

[15] See generally, Richard Civille, The Internet and the Poor in PUBLIC ACCESS TO THE INTERNET 175-207 (1995); National Telecommunications Information Administration, Connecting the Nation: Classrooms, Libraries and Health Care Organizations in the Information Age (1995).; ROBERT A. ANDERSON, ET AL. UNIVERSAL ACCESS TO E-MAIL (1995); Frederick Williams, On Prospects for Citizens' Information Services in THE PEOPLE'S RIGHT TO KNOW: MEDIA, DEMOCRACY AND THE INFORMATION HIGHWAY 1-24 (1994); Office of Technology Assessment, 101st Cong., Critical Connections: Communication for the Future (1990); For a critique of the Internet from a political economic perspective, see ROBERT W. MCCHESNEY, RICH MEDIA, POOR DEMOCRACY: COMMUNICATION POLITICS IN DUBIOUS TIMES, 119-185 (1999).

[16] See e.g., National Telecommunications and Information Administration. Falling Through the Net: Defining the Digital Divide (viewed October 10, 1999), available at <http://www.nita.doc.gov>

[17] For a theoretical view of how cultural studies may be applied to the law, see Robert Trager & Joseph A. Russomanno, "...The Whole Truth ...": The First Amendment, Cultural Studies, and Comparative Law, 19 JOURN. OF COMM. INQUIRY 16-32 (1995); For a review of how social research may inform communication law and policy see JEREMY COHEN AND TIM GLEASON, SOCIAL RESEARCH IN COMMUNICATION AND LAW (1990).

[18] Reno, 521 U.S. 844 (1997).

[19] LEONARD LEVY, EMERGENCE OF A FREE PRESS (1985). No one really knows for sure what the writers of the First Amendment intended. According to Levy, our founding fathers did not have such an embracing acceptance of speech as often touted by scholars and theorists. Instead, Levy believes libertarian thought and the practice of freedom of expression did not occur until after the Sedition Act of 1798.

[20] See W.Wat Hopkins, The Supreme Court Defines the Marketplace of Ideas, 73 JOURNALISM & MASS COMM. Q. 40-53 (1996).; Within the Federal Communications Commission, the marketplace of ideas metaphor has also been invoked in the regulation of communications, especially deregulatory efforts. see Philip M. Napoli, The Marketplace of Ideas Metaphor in Communications Regulation, 49(4) JOUR. OF. COMM., 151-169 (1999).

[21] JOHN MILTON, AEROPAGITICA (1644), reprinted (1895).

[22] Id. at 73.

[23] Id. at 44.

[24] JOHN STUART MILL, ON LIBERTY (1859), reprinted (1956).

[25] Id. at 13.

[26] Id. at 63-64.

[27] Id. at 114.

[28] Id. at 140.

[29] Abrams, 250 U.S. 616 (1919).

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[30] JEREMY COHEN, CONGRESS SHALL MAKE NO LAW: OLIVER WENDELL HOLMES, THE FIRST AMENDMENT, AND JUDICIAL DECISION MAKING116 (1989).

[31] Abrams, 250 U.S. 616, 630-31 (1919).

[32] ADAM SMITH, WEALTH OF NATIONS (1776). Smith provides an explanation of laissez-faire and the "invisible hand" theory supporting capitalism and free markets.

[33] See Lucas Powe, Scholarship and Markets, 56 GEO. WASH. L. REV. 172 (1987). Powe provides an interesting overview of First Amendment theory as it relates to markets while simultaneously supplying a critique of Owen Fiss and Jerome Barron.

[34] TONY MCADAMS, LAW, BUSINESS & SOCIETY 264-65 (1995).

[35] See Powe note 33, at 172. As Powe points out, many academics agree that laissez-faire approach properly reigns in the marketplace of ideas.

[36] See Jerome Barron, Access to the Press — A New First Amendment Right, 80 HARV. L. REV. 1641 (1967).

[37] See Jerome Barron, In Defense of Fairness: A First Amendment Rationale for Broadcasting's 'Fairness' Doctrine, 37 U. COLO L. REV. 31 (1964); See also Jerome Barron, The Federal Communications Commission's Fairness Doctrine: An Evaluation, 30 GEO. WASH. L. REV. 1 (1961).

[38] New York Times v. Sullivan, 376 U.S. 254 (1964).

[39] See Barron, note 36, at 1641-42.

[40] See Powe, note 33 at 177. The fairness doctrine required broadcasters to "(1) present controversial issues of public importance to their audiences and (2) ensure that both sides of the issues are available."

[41] Red Lion Broadcasting v. FCC, 395 U.S. 367 (1969).

[42] See Powe, note 33 at 178; Miami Herald v. Tornillo, 418 U.S. 241 (1974).

[43] For a critical assessment of the shortcomings of the fairness doctrine, see 1985 FCC Fairness Doctrine Report, 102 F.C.C.2d 145 (1985).; Congress did not legislate the doctrine. Telecommunications Research & Action Center v. FCC, 806 F.2d 1115 (D.C. Cir. 1986).; The FCC decided the fate of the fairness doctrine, Meredith Corp. v. FCC, 809 F.2d 863 (D.C. Cir. 1987).; The FCC finally repealed the doctrine, Syracuse Peace Council, 2 FCC Rcd 5043 (1987).; U.S. District court legally affirmed the FCC's repeal, Syracuse Peace Council v. FCC, 867 F.2d 654 (D.C. Cir. 1989).; For further review of the fairness doctrine, see generally SCOTT POWE, AMERICAN BROADCASTING AND THE FIRST AMENDMENT (1987).

[44] See Owen Fiss, Why the State?, 100 HARV. L. REV. 781 (1987).

[45] See Owen Fiss, Free Speech and Social Structure, 71 IOWA L. REV. 1405 (1986).

[46] Id. at 1410.

[47] Id. at 1412-13.

[48] See McADAMS, note 34 at 788.

[49] See Powe, note 33 at 180.

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[50] Communications Decency Act of 1996 as contained in Title V, Sec. 502 of the Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56, 133-35.

[51] A. Harmon, Landmark Online Decency Hearing Begins, LOS ANGELES TIMES, March 22, 1996 at D1.; L. Miller, Internet Indecency Act Goes to Court, USA TODAY, March 21, 1996 at 1D.

[52] ACLU v. Reno, 929 F. Supp 824, 832 (E.D. Pa. 1996) (fact 11).

[53] Id. at 836 (fact 34).

[54] Id at 838 (fact 48).

[55] Id. at 844 (fact 82).

[56] Id. at 842 (fact 74).

[57] Id. (fact 76).

[58] Id at 843. At the time of the hearings, the creation of a Web site would cost between $1,000-$15,000, with monthly operating costs depending on one's goals and the Web site's traffic. Commercial online services such as American Online allow subscribers to create Web pages free of charge (fact 76)."

[59] Id. at 832 (fact 12).

[60] Of course, costs for a computer, modem, software and internet access account must be absorbed for a user(s) to be a participant in cyberspace.

[61] Id. at 837 (fact 44).

[62] Id. at 843 (fact 79).

[63] Id. at 842 (fact 74).

[64] Id. at 844-45 (fact 88).

[65] Id at 845 (fact 89).

[66] Implicit in the assumption is that citizenry is well-represented on the Internet. For an overview of access inequities, see pages 20-21 of text.

[67] Abrams, 250 U.S. 616, 630 (1919).

[68] Tornillo, 418 U.S. 241, 248-50 (1974).

[69] Turner, 117 S. Ct. 1174 (1997).

[70] ACLU v. Reno, 929 F. Supp. 824, 881 (E.D. Pa. 1996).

[71] Id. at 883.

[72] Reno v. ACLU, 521 U.S. 844 (1997).

[73] Id. at 885.

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[74] In its grounding, the Supreme Court summarizes and quotes the District Court's findings of fact on Internet communications.

[75] Id. at 850. "The number of host computers...increased from about 300 in 1981 to 9,400,000 by the time of the trial in 1996. Roughly 60% of these hosts are located in the United States. About 40 million people used the Internet at the time of the trial, a number that is expected to mushroom to 200 million by 1999."

[76] Id. at 853.

[77] Id.

[78] Id. at 870.

[79] Again, this implies access to the Internet is abundant and widely available. For an overview of access inequities, see pages 20-21 text.

[80] Id at 885.

[81] Child Online Protection Act of 1998, Pub. L. No. 105-277, 112 Stat. 2681 (1998) (codified at 47 U.S.C. § 231). For a good overview of COPA, including legislative history and the various arguments raised during injunction hearings, See Peter Jacobson, The Child Online Protections Act, Taming the World "Wide Web, 9 J. ART & ENT. L. 421 (1999)

[82] Many have termed COPA to be the second, but tamed incarnation of the Communications Decency Act, specifically changing language to harmful to minors and attempting to make commercial pornography inaccessible to minors through the use of verification systems. See generally, Electronic Frontier Foundation, (visited April 20, 1999) <http://www.eff.org/pub/Legal/Cases/COPA/>.

[83] ACLU v. Reno, 31 F. Supp. 2d 473 (E.D. Pa. 1999).

[84] Id. at 476.

[85] ACLU v. Reno, 28 Media L. Rep. 1897 (3rd. Cir. 2000)

[86] Id. at 1929.

[87] Id. at 1902.

[88] Reno v. ACLU, 521 U.S. 844, 877 (1997).

[89] ITHIEL DE SOLA POOL, TECHNOLOGIES OF FREEDOM, 224 (1983).

[90] Id. at 226.

[91] Id. at 246-48.

[92] See generally Jerry Berman and Daniel J. Weitzner, Abundance and User Control: Renewing the Democratic Heart of the First Amendment in the Age of Interactive Media, 104 YALE L. JOUR 1619 (1995).; Anne Wells Branscomb, Anonymity, Autonomy, Accountability, Challenges to the First Amendment in Cyberspace, 104 YALE L. REV. 1619 (1995).; The Message in the Medium: The First Amendment on the Information Superhighway, 107 HARVARD L. REV 1062 (1994).; Robert Corn-Revere, New Technology and the First Amendment: Breaking the Cycle of Repression

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17 HASTINGS COMM. L.J. 247 (1994).; JONATHAN WALLACE & MARK MANGAN, SEX, LAWS AND CYBERSPACE (1996).

[93] See Berman and Weitzner, supra note 92 at 1622.

[94] While many debate over the existence of the public sphere, Jurgen Habermas believes the public sphere, specifically that of the classical bourgeois, was most developed in eighteen-century Europe. During this period, the public sphere was based primarily on the quality of argument and not on the status of participants. However, since this time, there has been a continual withdrawal from public participation and discourse. To Habermas, the quality of discourse and amount of participation help shape the nature of a public sphere in democratic society. See generally, See JURGEN HABERMAS, THE STRUCTURAL TRANSFORMATION OF THE PUBLIC SPHERE (1992).

[95] For an excellent history of universal service as it relates to telephony see MILTON MUELLER, UNIVERSAL SERVICE: COMPETITION, INTERCONNECTION AND MONOPOLY IN THE MAKING OF THE AMERICAN TELEPHONE SYSTEM (1996).

[96] Telecommunications Act of 1996 § 254 Pub. L. No. 104-104, 110 Stat. 56, 74, (codified in 47 U.S.C. § 254 et seq.)

[97] Such principles of 'evolving' universal service include: "Quality and rates (which are just, reasonable and affordable); Access to Advanced Services in all regions of the nation; Access in Rural and High Cost Areas to services comparable in urban areas; Equitable and Non-Discriminatory Contributions by all telecommunication providers for the preservation and advancement of universal service; Specific and Predictable Support Mechanisms to preserve and advance universal service; and Access to Advanced Telecommunications Services for Schools, Health Care and Libraries." 47 U.S.C. § 254 (b) (1997).

[98] 47 U.S.C § 214 (e) (1997).

[99] 47 U.S.C. § 254 (c) (1) (A-D) (1997).

[100] 47 U.S.C § 254 (c) (1) (1997). In addition, Section 623(b)(3) of the Appropriations Act requires the FCC to review "who is required to contribute to universal service under section 254(d)... and related existing federal universal service support mechanisms, and of any exemption of providers or exclusion of any service that includes telecommunications from such requirement or support mechanisms." 15 U.S.C. §153(20) (1998).

[101] Notice of Proposed Rulemaking for Consideration of Universal Service Pursuant to the Telecommunications Act of 1996, CC-Docket No. 96-45, 1996 FCC LEXIS 1000.

[102] See Benton Foundation, Summary of Comments Filed on Universal Service Proceeding, (visted May 20, 1997), <http://www.benton.org.cgibin/lite/summaries/summaries.html/>

[103] Federal-State Joint Board on Universal Service, CC Docket No. 96-45, Recommended Decision, 12 FCC RCD 87 (1996).

[104] Federal-State Joint Board on Universal Service, CC Docket No. 96-45, Report and Order, 12 FCC Rcd 8776 (1997).

[105] Federal-State Joint Board on Universal Service, CC Docket No. 96-45, Report and Order, 12 FCC Rcd 8776 (1997).

[106] The definition and differences between a telecommunications service and information service have amounted to a contentious debate. Some suggest the Internet may hinder the ability of funds

that will be pooled into the Universal Service Fund by driving away demand through technologies such as IP networking and telephony. See generally, Federal-State Joint Board on Universal Service, CC-Docket No. 96-45, Report to Congress, 13 FCC Rcd 1150 (1998).

[107] Federal Communications Commission, Connecting the Globe: A Regulator's Guide to Building a Global Information Community, at Section VI, (visited June 10, 2000), <http://www.fcc.gov/connectglobe/>; For an overview of universal service and access as applied to the Internet, see Benjamin Compaigne and Michael Weiraub, Universal Access to Online Services: An Examination of the Issue, 21 TELECOM POL 15-33 (1997).

[108] In provisioning universal service, the Act mandates the Commission to "establish competitively neutral rules" and "to enhance, to the extent technically feasible and economically reasonable, access to advanced telecommunications and information services for all public and non- profit elementary and secondary school classrooms, health care providers, and libraries." 47 U.S.C. § 254 (h)(2)(A) (1997).; See also Federal-State Joint Board on Universal Service, CC Docket No. 96-45, Report and Order, 12 FCC Rcd 8776 (1997).

[109] See Trends in Telephone Service, (viewed May 2, 1999), <http://www.fcc.gov/ccb/stats>.; Federal-State Joint Board on Universal Service, Monitoring Report, (CC-Docket 98-202), (viewed 5/2/99), <http://www.fcc.gov/ccb/stats>.

[110] See Mark Cooper, Ensuring Telephone Access in the Digital Age, (viewed May 2, 1999), <http://www.cme.org/telephoneaccess.html>. Reasons why universal service levels remain stagnant deal with often inapparent factors, See Milton Mueller & Jorge Reina Schement, (1995). Universal Service from the Bottom Up: A Profile of Telecommunications Access in Camden, New Jersey. 12 INFO SOCIETY 273-292 (1996).; Jorge Reina Schement, Beyond Universal Service: Characteristics of Americans Without Telephones, 19 TELECOM POL 477-485 (1995).

[111] See Susan Goslee, Losing Ground Bit by Bit: Low-Income Communities in the Information Age, (visited April 26, 1999) <http://www.benton.org/>.

[112] Since 1994, the World Wide Web has experienced periods of exponential growth. See generally, Internet Domain Survey, (visited June 30, 2000), <http://www.isc.org/ds/>; As of April '99 there were 163 million people online in the world, 90 million in the U.S. & Canada. As of June 2000, there were 332 million people online in the world, 147 million in the U.S. & Canada. See NUA Internet Surveys, (visited July 20, 2000) <http://www.nua.ie/surveys/how_many_online/index.html>; As of February '99, more than 43.2 Million Internet hosts were on the Internet. As of February 2000, than number climbed to more than 74.2 million. See Tony Rutowski, Internet Trends, (visited July 20, 2000), <http://www.ngi.org/trends.htm>.

[113] See Goslee, note 111 at 5.

[114] See National Telecommunications Information Administration, Falling through the Net II: New Data on the Digital Divide, (viewed May 2, 1999), <http://www.nita.doc.gov/nitahome/net2/falling.html>.; For comparison purposes, See also, Thomas Novak & Donna Hoffman, Bridging the Digital Divide: The Impact on Computer Access and Internet Use, (visited May 3, 1999) <http://www.2000.ogsm.vanderbilit.edu/papers/race/science.html>; National Telecommunications Information Administration Falling Through the Net: A Survey of the "Have Nots" in Rural and Urban America (1995).; For more recent statistics see National Telecommunications and Information Administration, Falling Through the Net: Defining the Digital Divide (viewed October 10, 1999), available at <http://www.nita.doc.gov>

[115] See Mark Cooper & Gene Kimmelman, The Digital Divide Confronts the Telecommunications Act of 1996: Economic Reality Versus Public Policy, (visited March 4, 1999) <http://www.igc.org/consunion/other/telecom4-0299.htm>.

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[116] See James Katz and Philip Aspden, Internet Dropouts in the USA, 22 TEL POLICY 327-339 (1998). Main reasons for dropping off the Net, were loss of institutional access, loss of interest, problems using the Internet, and bills being too prohibitive. Id. at 333.

[117] See National Center for Education Statistics, Internet Access in Public Schools and Classrooms (1999), (viewed May 5, 1999), <http://www.nces.ed.gov/pubs99/19999017.html>. NCES believes the numbers will rise even higher given the availability of the E-rate program.; For a description of how E-rate works, see E-rate (viewed May 5, 1999) <http://www.slcfund.org>.

[118] Id. NCES 1998 data indicates "public schools with 50 percent or more minority enrollment had Internet access in 37 percent of instructional rooms, compared to 52, 59 and 57 percent in schools with 21 to 49 percent, 6 to 20 percent, and less than 6 percent minority enrollment. Similarly, public schools with 71 percent or more students elgible for free or reduced-price school lunch had 39 percent of their instructional rooms connected to the Internet compared to 53 percent of rooms with 11 to 30 percent of students, and 62 percent of rooms in schools with less than 11 percent of students elgible."

[119] See generally, Richard Civille, The Internet and the Poor in PUBLIC ACCESS TO THE INTERNET 175-207 (1995); CHARLES FIRESTONE AND JORGE REINA SCHEMENT (EDS.), TOWARD AN INFORMATION BILL OF RIGHTS AND RESPONSIBILITIES (1995); National Telecommunications Information Administration, Connecting the Nation: Classrooms, Libraries and Health Care Organizations in the Information Age (1995).; ROBERT A. ANDERSON, ET. AL., UNIVERSAL ACCESS TO E-MAIL (1995); Frederick Williams, On Prospects for Citizens' Information Services in the People's Right to Know: Media, Democracy and the Information Highway 1-24 (1994); Office of Technology Assessment, 101st Cong., Critical Connections: Communication for the Future (1990).

[120] See Williams, supra note 119 at 4.

[121] See NTIA, supra note 119.

[122] See Harmeet Sawhney, Universal Service: Prosaic Motives and Great Ideals in TOWARD A COMPETITIVE TELECOMMUNICATIONS INDUSTRY 205-224 (1995).

[123] Id. at 208.

[124] See generally, Robert Capello, SPATIAL ECONOMIC ANALYSIS OF TELECOMMUNICATIONS NETWORK EXTERNALITIES 19-22 (1996); J. Cornford, S. Graham, & S. Marvin, The Socio-Economic Benefits of a Universal Network, 20 TELECOM POL 3-10 (1996).

[125] See generally ALAN SICA (ED.), WHAT IS SOCIAL THEORY?: THE PHILOSOPHICAL DEBATES (1998)

[126] See generally JORGE REINA SCHEMENT AND TERRY CURTIS, TENDENCIES AND TENSIONS OF THE INFORMATION AGE (1995).

[127] There are many theories embedded under the umbrella of postmodernism, See Robert Antonio, Mapping Postmodern Social Theory WHAT IS SOCIAL THEORY?: THE PHILOSOPHICAL DEBATES 22-73 (Alan Sica ed.) (1998) The following section adopts one interpretation of postmodernist theory that is useful to describe cultural and technological characteristics of the Internet.

[128] See generally DAVID HARVEY, THE CONDITION OF POSTMODERNITY (1989).

[129] Considerable debate exists on how one views the self as capable of transformation within a postmodern condition. A more pessimistic vision is one of fragmentation, while ever-emergent typlifies a more optimistic outlook of continuos change. In part because of my personal view and for purposes of clarity, I refer to the self as 'ever-emergent' in the rest of this section.

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[130] See e.g., MICHEL FOUCAULT, THE ORDER OF THINGS (Vintage Books ed. 1994) (1971).

[131] See Richard Dyer, White, 29 SCREEN 44-64 (1988); Richard Dyer, Introduction, in THE MATTER OF IMAGE: ESSAYS ON REPRESENTATION 1-5 (1993).; bell hooks, Eating the Other: Desire and Resistance, in BLACK LOOKS: RACE AND REPRESENTATION 21-39 (1992).

[132] WILLIAM GIBSON, NEUROMANCER (1984).

[133] See Harvey note 128 at 10.

[134] Id. at 11.

[135] Id. at 13.

[136] Id. at 16-17.

[137] See Elizabeth Reid, Virtual Worlds: Culture and Imagination, in CYBERSOCIETY: COMPUTER-MEDIATED COMMUNICATION AND COMMUNITY 164-183 (Steven Jones ed.) (1995).

[138] See Harvey note 128 at 44.

[139] Id at 48.

[140] See Foucault note 130 at 144.

[141] For excellent overviews of the Internet's affects on telecommunications law and policy see generally Kevin Werbach, Digital Tornado: The Internet and Telecommunications Policy, (last viewed April 12, 1998) <http://www/fcc/gov/Bureaus/OPP/working_papers/oppwp29.pdf/>.; ; INTERNATIONAL TELECOMMUNICATIONS UNION, CHALLENGES TO THE NETWORK: TELECOMMUNICATIONS AND THE INTERNET (1997).

[142] See generally David Post, Anarchy, State and the Internet: An Essay on Law Making in Cyberspace, J. OF ONLINE L. (1995) (visited Sept. 3, 1996) <http://warthog.cc.wm.edu.law/publications/jol/post.html.>; A. Michael Froomkin ,The Internet as a Source of Regulatory Arbitrage, in BORDERS IN CYBERSPACE: INFORMATION POLICY AND THE GLOBAL INFORMATION INFRASTRUCTURE (Brian Kahin & Charles Nesson, eds.) (1997)

[143] See ASPEN INSTITUTE, INTERNET AS PARADIGM (1997).

[144] Id.at viii-xi.

[145] See Branscomb, supra note 92 at 1678.

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New Hope or Old Power:
New Communication, Pornography and the Internet.

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Abstract

New communication technologies in general and the Internet in particular have led some scholars to speculate that we are ushering in a new era of pluralistic and democratic communication. This paper takes a critical look at this optimistic view.

Using textual analysis and a feminist theoretical framework, this research examines pornography sites on the World Wide Web to illustrate how the Internet seems to be reifying existing power structures, i.e. male dominance and the exploitation of women. The authors determined that these sites reinforce traditional constructions of men's power over women, and this may cause us to pause as we consider how new communication technology will be used in the future.

New Hope or Old Power:

New Communication, Pornography and the Internet.

"Progress is a comfortable disease." e.e. cummings

"Men have become the tools of their tools." Henry David Thoreau

Introduction

There is little doubt that technology is changing and has changed the way we think about communication. Each time we send or receive an e-mail or surf the Internet, it becomes clear there is a new mode of communication that becomes a bit more pervasive with each passing day. The question that remains is to what end?

Internet usage during the last half of the 1990s grew at a phenomenal rate. But not only did the numbers of people to join cyberspace change dramatically, the demographics did as well. According to Georgia Tech's Graphic, Visualization, and Usability Center, in January 1994 there were approximately 1,250 web servers and 95 percent of the user population was male. A more recent survey, during October and November of 1997, estimated more than one million web servers and a U.S. user population comprised of around 40 percent females (Graphics, Visualization, and Usability Center, 1997). During a more recent survey, the Center found that in October of 1998 female users had dropped to 34 percent while females made up 48.5 percent of new users (Graphics, Visualization, and Usability Center, 1998). The latest survey shows the instability of the number of female users on the Internet. But one thing has remained the same. Throughout these years of change cyberspace has remained the domain of white males, particularly those that are college educated and highly compensated for their work (Gunkel and Gunkel, 1997).

This fact is especially noteworthy in light of a number of recent writings that have framed the net as the hope for democracy and plurality (Barlow, 1997; Pavlik, 1996; Rosen, 1995). Scholar Douglas Kellner has endorsed new technology as a means by which we might "help invigorate democratic debate and participation" (1995). Kellner sees new technology in general and the Internet in particular as a very hopeful development, which will allow more voices, and specifically more intellectual voices, to participate in some form of what Jürgen Habermas called the public sphere – the place at which citizens discuss and debate questions of the day.

We remain more skeptical about the new technology and about the new means of communications. In this paper, using a feminist analysis of a group of internet sites, we will argue that it appears that at least on one level, the Internet may just be a newer way of delivering older and more familiar messages, ultimately reinforcing old and all too familiar power structures.

Using textual analysis, this research examines pornography sites on the World Wide Web to illustrate how the Internet seems to be reifying existing power structures, i.e. male dominance and the exploitation of women. To claim the Internet to be the answer to democracy is to simplify the impact of this new medium. This research aims to complicate this notion.

Rosoff (1999) calls pornography on the Internet "the quietest big business in the world" (http://www.cnet.com/specialreport/0-3805-7-280110.html?tag=st.sr.6014.linksgp). It is credited with paving the way for e-commerce as well as playing a major role in the Internet's explosive growth. Rosoff explains that because of societal condemnation the Internet pornography industry has largely remained underground. This has meant that, while the popular press and policy makers voice alarm at the availability and quantity of Internet porn, accurate statistics are extremely difficult to locate. Rosoff (1999) reports that "estimates range from 20,000 to 7 million active X-rated sites on the Net" (http://www.cnet.com/specialreport/0-3805-7-280110.html?tag=st.sr.6014.linksgp). Statistics aside, pornography is known to be widely accessible on the Internet.

The Internet – A New Hope

Barlow (1997) describes cyberspace as

> [A] new social space, global and antisovereign, within which anybody, anywhere can express to the rest of humanity whatever he or she believes without fear ... which might undo all the authoritarian powers on earth. (p. 4)

This type of optimism about the impact of the Internet is common among both scholars and industry experts who tout the new communication medium as the "ultimate democracy" (Gunkel & Gunkel, 1997). While less optimistic, Gunkel and Gunkel explain "theorists have posited cyberspace as the realm of cultural liberation and millennial aspirations" (p. 129). Rosen (1995) writes that the country "has never been freer, thanks to the epidemic of cheap speech spreading raucously across the globe" via the Internet. Pavlik (1996) notes that "to some, advances in information technology are destroying the ability of elites to control what people know, hear, or read" leading toward greater democracy and freedom (p. 296).

While surveying discourse about the Internet, Dicken-Garcia (1998) found the most pervasive theme to be centered around progress "conceptualized most often in terms of what humankind gains by virtue of its emergence, the Internet is equated with progress and advancement of civilization" (p. 19-20). But as Gunkel and Gunkel (1997) point out, this assurance that a new technology will bring about the ultimate democracy is not new; the promise was heard with both the advent of radio and television. The authors ask "Why are we so naive as to think that the ultimate democracy, the perfect republic, is achievable this time around?" (Gunkel & Gunkel, 1997: p. 130). Kellner writes that

> computer technologies are at least potentially more democratic and empowering than previous communication technologies that were more centralized, often inaccessible to public intervention, and involved in more one-way and top-down communication. (1995: pp 438-439)

He goes on to argue that computer technology is "accessible to participation and thus both empowering and potentially capable of promoting democratic debate and discussion" (p. 439).

This leads to another prevalent theme within this rhetoric: the notion of utopian plurality. Much has been written about the greater anonymity Internet participants enjoy through online group participation. Many argue that because the gender, race, disabilities and other physical appearances are not immediately (or ever) known through computer mediated communication, participation is more evenly distributed among members (Baym, 1995). Baym explains that "this egalitarianism is sometimes seen as an advantage of CMC*, for it allows women and minorities who are not heard in face-to-face interaction to have their voices heard" (1995: p. 140). Again Gunkel and Gunkel (1997) counter this notion. They write

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*computer mediated communication

> [T]he cyberspatial researchers who forecast and celebrate a utopian community that is 'raceless, genderless, and classless' do so at the expense of those others who are always already excluded from participating in this magnificent technocracy precisely because of their gender, race, and class. Far from resolving the crisis of the multicultural society, cyberspace could perpetuate and reinforce current systems of domination. (Gunkel & Gunkel, 1997: p. 131)

McChesney (1996) is also among those scholars less optimistic about the democratic and pluralistic benefits of the Internet. While acknowledging the Internet's potential as a driving force for democratic communication, his concern with the implications of "rapid corporate concentration and commercialization of media industries" leads him to believe this potential will never be met (p. 98). McChesney argues that ultimately these new communication technologies are "the product and a defining feature of a global capitalism that greatly enhances social inequality" (1996: p. 99). Using empirical research to back up their argument, Postmes, Spear and Lea (1998) also challenge the validity of the utopian images of computer mediated communication. They argue

> Cyberspace may provide the ideal opportunity to create a new virtual society, but if people fall back on the tried and trusted categories of the old world and actively carry over the constraints of their own everyday identities, this new world will rapidly resemble the old one. (Postmes, Spears & Lea, 1998: p. 708)

In other words, the potential of a new medium alone does not guarantee change. Real barriers – social, economic and political – suppress the radical potential of new communication technologies (Winston, 1996). In essence these scholars are questioning how new technologies can offer an enhanced democracy when the same power relations are in place.

Pornography – An Old Power

Pornography is one of the most often addressed issues relating to the Internet. Most of the scholarly work, however, is related to policy and legal issues. In fact this is one of the most active and controversial areas in media law. But outside of media law, surprisingly little work by media scholars has actually focused on Internet pornography. In other areas of communication scholarship much has been written about pornography, particularly from feminist media scholars. But just as there are many feminisms, there are many feminist perspectives concerning pornography.

The issue of pornography has drawn considerable attention in recent years from those who have promoted stronger governmental restrictions on the development, sale and distribution of pornography. Some believe pornography should be prohibited, while others contend that any form of antipornography censorship is unacceptable. At the heart of the issue in the debate over pornography is whether it harms women.

The most often referred to perspective is that of radical feminists, a viewpoint usually represented by the voices of Catharine MacKinnon and Andrea Dworkin. The radical feminist critique is grounded on the notion that pornography is sexualized male dominance and female submission

(Jensen, 1995). Dworkin (1985) explains "Pornography, ... is a discrete, identifiable system of sexual exploitation that hurts women as a class by creating inequality and abuse" (p. 9). MacKinnon, writes "[P]ornography, in the feminist view is a form of forced sex, a practice of sexual politics, an institution of gender inequality" (MacKinnon 1987, p. 148). She also argues that pornography "eroticizes hierarchy, it sexualizes inequality. It makes dominance and submission into sex" (p. 172). In 1983 MacKinnon and Dworkin drafted legislation for the City Council of Minneapolis that defined pornography as a form of sex discrimination. Approved by the city council, the legislation was vetoed by the mayor. A more moderate version of the ordinance was passed by the City of Indianapolis. The Indianapolis ordinance, however, was held to be unconstitutional by a federal district court and by the Seventh Circuit Court of Appeals. That ordinance offers a working definition of pornography:

> [Pornography is] the graphic sexually explicit subordination of women through pictures and / or words, that also includes one or more of the following: (a) women are presented dehumanized as sexual objects, things, or commodities; or (b) women are presented as sexual objects who enjoy humiliation and pain; or (c) women are presented as sexual objects experiencing sexual pleasure in rape, incest, or other sexual assault; or (d) women are presented as sexual objects tied up or cut up or mutilated or bruised or physically hurt; or (e) women are presented in postures or positions of sexual submission, servility or display; or (f) women's body parts – including but not limited to vaginas, breast, or buttocks – are exhibited such that women are reduced to those parts; or (g) women are presented being penetrated by objects or animals; or (h) women are presented in scenarios of degradation, humiliation, injury, torture, shown as filthy or inferior, bleeding, bruised or hurt in a context that makes these conditions sexual. The use of men, children or transsexuals in the place of women shall also be deemed to be

> pornography for purposes of this definition. (MacKinnon, 1993: p. 121)

Other feminist perspectives note concern with the objectification of women in pornography produced for heterosexuals (Durham, 1995). Durham explains how this objectification seems "to depend, to some extent, on the framing of women's bodies such that they are in positions of reduced power, particularly in relation to men" (1995: p. 6). Kuhn (1985) explains that the photographic images of women in pornography "speak to a masculine subject, constructing women as object, femininity as otherness" (p. 273). In the process of constructing women as objects, pornographic images often isolate body parts – particularly women's genitals, breasts and buttocks. This dehumanizing gesture "mark[s] the woman as feminine, not-male, different" (Kuhn, 1985: p. 275). Kuhn also notes how pornographic images of women can be seen as positioning women in a powerless position because of the voyeuristic nature of spectators. "The voyeur's pleasure depends on the object of this look being unable to see him: to this extent, it is a pleasure of power, and the look a controlling one" (Kuhn, 1985: p. 272).

Along with the construction of a gender hierarchy in heterosexual pornography, racial or ethnic power structures exist as well. Mayall and Russell (1990) note how white women are the norm in pornographic materials while people of color fall into special interest categories. Furthermore, when surveying pornographic materials, the authors found a majority of those that used people of color conveyed that information for the consumer. Mayall and Russell explain

> An average of 77% of the magazines on display in six different stores identified the ethnicity of the person in the title. This presumably means that skin color is very salient to most consumers. It comes as no surprise in a racist culture like the United States, that people of color are a specialty item in pornography. (pp. 288-289)

Not only are women of color a specialty item in pornography, they are presented in stereotypical ways. For example, African-American women are shown to be "animalistic, incapable of self-control, sexually depraved, impulsive [and] unclean" (Mayall & Russell, 1990: p. 295). Collins (1990) notes that "the image of Asian women is pornography is almost consistently one of being tortured" (p. 282).

Using Internet pornography sites as an example of how power relations in the real world are reified in the virtual world, this research hopes to complicate notions of this new technology as a great hope for democracy and pluralism.

Theoretical Framework

When it came time to analyze the pornography web sites, we used the works of other scholars to guide our critique of the images and construction of a social discourse. Particularly helpful was Jensen and Dines' (1998) work. Building on the work of Andrea Dworkin and other feminist scholars, they established four elements that make up the sexualization of subordination in pornography. These include hierarchy, objectification, submission and violence. Hierarchy is the phenomenon that occurs where there is an inherent power structure, wherein men are in control. Objectification occurs when a human is transformed into an object or a commodity. Submission describes what happens when an oppressed group must comply in order to survive. Violence is the result of the first three and often appears as if it is the right of the person committing the violence (Jensen & Dines, 1998: p.66). These four areas proved helpful in interpreting the sexual content of the web sites in this study.

The more difficult part of the study came in trying to determine what might substantiate progress when it came to new technology and communications systems. It's fairly easy to look at existing systems and determine shortfalls; it is more difficult to conceptualize what a more democratic or pluralistic system would include. For guidance we turned to Michael Traber, who has written about communication ethics. Drawing from his work, we determined that a communication system that would attempt to be more inclusive would have the following characteristics: 1) it would be moral in regard to respecting people as human beings; 2) it would be intended for all members of society; 3) communication must be free, but will only flourish in an atmosphere where there is an attitude of responsibility for one another; and 4) it would be cross-cultural, not simply upholding the view of one particular group or nation (Traber, 1997).

In examining web sites we were also concerned with how meaning is produced and how a social discourse is constructed. Warnick offers a means for such critical analysis. She explains that

> the critique can discern how audiences are hailed or interpellated, how metanarratives are constructed, how style enhances message appeal, and how certain interests are marginalized in CMC. This can be done by studying texts as systems: noting recurrent patterns of appeal, construction of ethos in texts, who can speak, who is silenced, and how identities are discursively constructed. (Warnick, 1999: p. 3)

These frameworks guided us as we attempted to analyze what we found on the Web and helped us as we tried to determine what these findings meant in the larger context of the Web as a new technology and part of a new system of communication.

Getting Started

What is pornography? This is a question jurisprudence and policy makers have struggled to answer. For the purposes of this study, we are defining pornography as sexually explicit texts, photos, and moving images that are produced specifically for the arousal and gratification of a largely male audience.

How does one go about finding pornography on the World Wide Web? A more appropriate question might be how does one avoid it? That is because some of the pornography web page operators have cleverly purchased URL addresses that are similar to other common addresses, so an Internet user might end up at a pornographic sight by simply trying to find a number of sites on the Web. If, for instance, you type in www.whitehouse.com you'll end up at a porn site. But perhaps the most direct way to find pornography is through search engines. If users type any sexually-oriented word, like sex, for instance, they'll be directed to many different sites. Some sites specialize in listing other sites and those sites' web addresses. For purposes of this study the researchers visited more than one hundred different sites during several months. Many of those sites were found by using these link pages. Pornography is also available in other ways, including through usergroups and through e-mail, but for the purposes of this study, we focused upon the Web.

Once you enter the world of Internet porn, there are a seemingly endless amount of pages and links one can visit. When visiting some of the sites, there is an unexpected surprise in the form of consoles – new windows that pop-up without warning taking users to other sites or offering entrance or membership to paid pornographic sites. By visiting just one site you may be assaulted by a half dozen or more of these consoles taking over your computer screen. Even if one attempts to delete them, they often re-appear time and again. In this way the Web stops being a user-operated medium, and pornography seemingly takes over the screen, temporarily wresting control away from the computer user.

As well, many of the sights send covert messages to computers in the form of what are called "cookies" – so the site may electronically monitor a user's visit. Some of these cookies are also inscribed with computer code that may continue to send messages to the users even after they have left a site. Although there are many, many pornography pay sites on the web which offer subscriptions ranging from a day to a year, there are also hundreds of sites which require no payment and offer no screening for minors.

Analysis

Our analysis draws on previous analysis of porn, but focuses on new elements of Internet sites such as how they are constructed, what language is used, and ultimately what are the messages about women and women's roles?

Structure

Internet pornography web sites are similar in that many of them pay close attention to categories, in other words, there is often a clear organizational structure in place. That structure itself is telling. Photos and videos are not, for the most part, presented randomly. They are instead carefully sorted by type. Categories most often include sets of pictures labeled as Hardcore, Amateur, Teens, Gay and so forth.

Through this structure we found that pornography on the Internet is inscribed with certain cultural norms. It is first a primarily male dominated production, produced clearly for male consumption. It is as well predominantly white — the images are overwhelmingly of Anglo women and if photos are not, they are clearly labeled otherwise. For instance they are labeled as Asian, or Black, or Latino, or, in some cases, as Exotic. This tells us that the expectation is for these images, first and foremost, to be sexually explicit images of white women. Anything outside of this is considered outside the norm and thus needs labeling as such.

This leads to the question of dominance and control, sexually, socially and politically. Since white maleness has in Western culture been situated historically in a position of power, it should not be surprising that the pornography sites are structured to give male viewers control and power over the images they observe. From the position of voyeur, they become the master of this virtual universe, only viewing the images that are appealing to them from the various menus of categories that are available for their pleasure; for their personal gratification. In some regard, it might be viewed as an ideal male sexual domain, wherein users pick and choose from the type of women (blondes, brunettes, redheads) they prefer, they choose the sexual act (one-on-one, oral, group, kinky, bondage) they prefer, and they control the time spent visiting the site. It requires of them in return: nothing – no emotional commitment, no vulnerability. In fact, this penultimate control may in itself be part of the sexual attractiveness of Internet porn. As Ann Russo has written about the pornography industry: “It takes existing inequalities and makes them sexy and entertaining” (Russo, 1998: pp. 19-20).

The women pictured on the other hand, are not in a position of control, they are instead portrayed in these images as willing and submissive. These women’s very state of being, as captured in photographs and videos, very directly communicates a vulnerability and willingness to participate in any sexual act. The plethora of images of women, for instance, performing oral sex on men, as opposed to the dearth of images of the contrary, speaks loudly of the roles that are prescribed: women as pleasure-givers, men as pleasure-receivers; women as sexual object, men as user of that object; and women as subjugating to needs of the male dominator.

Language

In many of these sites, the pictures are not the only form of communication taking place. There is also the language that accompanies the images. Some sites simply offer a variety of pictures and videos. Others, called bookmark sites or picture post sites, offer links to hundreds of other sites. When a user clicks through, what is at the other end is either a photo or series of photos. The language used to describe these photos is quite telling.

One of the first themes that emerges as you read through these texts is again, that of women as submissive, willing participants in sexual acts. Examples include: "This hot babe wanna give you a blow__b[*];" "A horny slut riding a guys c__k;" or "Nice body on this girl and she loves to get f____ed." The words imply a sexual world where men rule and where women not only participate in any sexual act a man might dream up, but the women are anxious to do so and actually desire to service any male. Notice, also, how the language is constructed on these web sites: the women are silenced as they are described from a narrator's perspective – presumably a male voice. The language above emphasizes that these women want to perform sexually, the women are most certainly sexually aroused, and are so willing to have sex they can be classified as sluts. It is a world where women love to be f_____ed. Male consumers of these sites are encouraged to "cum see what this bitch can do." The women who are pictured on these sites have a seemingly unending appetite for sex, as is shown time and again in statements like "she can't suck enough c__k." In their analysis of pornographic films Jensen and Dines described this same effect wherein "in the pornographic world, sex is divorced from intimacy, loving affection, and human connection: all women are constantly available for sex and have insatiable sexual appetites: and all women are sexually satisfied by whatever the men in the film do" (Jensen and Dines,

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[*] The authors chose not to replicate explicit language found on these sties.

1998: 72). The language used on these sites speaks of a clear hierarchy, where men are in control and women must submit.

The constructed reality of these sites does not merely contain these notions. The language used clearly illustrates how U.S. cultural norms require that the women pictured must be beautiful. That, in general terms, means women with large breasts and small waists. This speaks to the objectification of women as sexual objects. Viewers do not care who the woman is, what is most important are the proportions of her body parts. If the women are not beautiful, the male consumers are warned in advance. "Two skanks f____ the boss at work," tells potential viewers two things: women may not be attractive by traditional standards, and thus are willing to participate in sex with any available man, including their boss, even in a work context. There is, of course nothing in the photo that implies the male is indeed the boss, but this interpretation of the photo further reifies the importance of viewing men in power positions over women. What message does this send users about what is and is not an appropriate relationship with women in the workplace?

If the women in the photographs are not thin, warnings are provided, as in "big fat girls making big fat love," or "fat chicks bigger than whales." Not only must women in this world be willing sex partners, but if they defy the cultural norm of female thinness, then this is labeled as unusual. As in all these descriptions, words chosen are direct and to the point and most often demeaning toward the women. On the contrary, nowhere on any of these sites did we see any warnings about the girth of the male involved, though many of them were indeed overweight according to cultural norms. Standards of beauty and thinness are only applied to the women – the dehumanized sexual objects – because pornography remains a male domain. In this domain, men are the consumers and women are the objects of that consumption.

Age shows up as another dominant theme in the language of these sites. Teen is a word that predominates many of these sites. This in many ways reflects the value U.S. society puts on youth, as reflected by the culture of Western fashion which uses young girls as models to define what is beautiful and attractive. "Young college girl gets a ride to class," is a fairly common kind of description that implies the age of the woman pictured. At these sites youth and beauty are so much seen as the norm, viewers are warned about pictures that contain women who may not be young and attractive such as: "Old Wrinkled UGLY GRANNY Shows T__s And Spread Legs."

But these sites go beyond implying women are merely college-aged, or are young because that may equal attractiveness. The other message that comes through from sexually explicit photographs of young women is that of an unequal power relationship between older men and younger women – another sexualized hierarchy. Especially concerning is that many of the photos and descriptions imply that the women pictured may be younger than the age of sexual consent. "Schoolgirl in a white stocking spreading legs and showing p____y," is one such description. In the photos themselves young woman often pose in various states of undress, but what clothing is on often implies that of a catholic school uniform, or other signs of youth, such as knee socks, tennis shoes, and cheerleading outfits. Add this to hair fixed in ponytails and props in the photos that often include schoolbooks or stuffed animals and it becomes obvious what the producers of the photos are communicating – the women pictured are younger than 18. Though some sites make it clear that the women posing are not under the age of 18, one wonders how they can be sure. By the ease of replication of some of the images, it seems clear many of these photos have been lifted and replicated from dozens of different sources. How could any of the page producers actually vouch for the age of those pictured? But beyond that, what they are communicating is disturbing in itself. If the girls are involved in sexual activities, it is often with men who appear to be significantly older. This results in allowing consumers of Internet porn to live out a societal taboo that is also illegal: having sexual relations with young girls.

The underlying issue here is that of sexual hierarchy. Older men most often have authority and power over younger women or girls. Therefore these men can control and dominate a relationship, or in this case a virtual relationship. A sampling of descriptions written by the web site producers tells the story clearly: "Young Skylah Shows Off Her Immature Hairless P____y;" "Young teen babes f____ed in every position!;"

"This Young Amateur Teen Looks Like She's 14!;" and "Cum See My Little Sister Spreading Open Her F____ Hole." These sites help male viewers construct a fantasy world where sex with much younger women is acceptable and encouraged, even if those relations, in day-to-day life, could result in charges of statutory rape.

At times, the text implies violence too. On one page, under the photo of a young girl the text reads: "Watch his huge c__k make me bleed." This sends a clear message: that violence is an acceptable option for the man and that young women want to be injured by men who penetrate and dominate them. This dehumanizing portrayal of women and girls enjoying pain further reinforces notions of male dominance and female objectification in sexual relations.

From text on these pages, race is also a concern. When subjects in the photos are not Anglo, these photos are always identified, often times in great detail, for instance "Black guy f____ing blonde teen, blond guy f____ing black girl," or "white c__k in black p____y." The idea here is that viewers may not want to see anything as shocking as inter-racial sex, so explicit detail is given warning users who want to avoid anything that might be outside of the norm of sex between white people. This is the domain primarily of the white male, so anything outside of Anglo sex is constructed as deviant. Blacks are characterized in a number of different ways, almost all derogatory, such as: "brown sugar sucking black tootsie roll," or "black ho takes 'em on." "The natives are restless," is the description given to the link for a site that features porn with exclusively African-American models. The world of porn has it's own Jim Crow line, and remains by and large remarkably segregated, with evidence of overt racism. Other descriptions reinforced racial stereotypes, such as "Black monsterc_ks f____ing white sluts," emphasizing an old notion that Blacks are endowed with oversized sex organs that also match their veracious sexual appetites. Asians and East Indians are also mentioned: "teen asian shows you her small t__s!" and "INDIAN MODEL MASSAGING HER SACRED P____Y FOR AN ORGASMIC HIGH." The second reference makes reference to a woman's genitals as being somehow sacred because she is from India. This illustrates an attempt to cast her – the non-white woman– as the other. In this case the woman is from a different national background, so she is portrayed as exotic; as outside the norm. These descriptions communicate clearly how these sites reinforce the normalness of whiteness. Anything outside of that is seen as not normal and is either taboo or exotic.

Conclusion

The Internet "remains a discursive environment in which communicators support values and ideologies, influence one another, and shape beliefs and attitudes" (Warnick, 1999: p. 3). The question is: whose values and ideologies are going to prevail? Will the Internet develop into some form of a marketplace of ideas – a high-tech public sphere? If current trends continue, one might be suspect. Certainly, at some Internet sites, and in some chat rooms, there can be a free flow of ideas. But how many individuals are participating and who are they? Consider that technology is a luxury afforded to those only with the means to secure it. That excludes millions of economically and technologically disadvantaged around the world. In two-thirds of the world, computers are neither prevalent nor easily accessed. Even in areas where technology is more readily available, white males tend to dominate use of the Internet.

In 1988 Carolyn Marvin published her study of the cultural impact of early technologies, such as the development of electricity. She argued that “the early history of electric media is less the evolution of technical efficiencies in communication than a series of arenas for negotiating issues crucial to the conduct of social life: among them, who is inside and outside, who may speak, who may not, and who has authority and may be believed” (Marvin, 1988: p.4). New media, in this case the Internet, has changed the terrain of communications. It is hard to argue that, especially when compared to radio and television broadcasting, it has not opened doors to many new voices. One can find web sites for a vast array of special interests, including marginalized voices. The problem lies in whether people, in any numbers, are visiting these sites and participating in meaningful dialogue. Or, are web sites and chat rooms thus far merely a high tech method of allowing small groups of people with special interests to talk to themselves? Are these the pamphlets and newsletters of the new

Millennium? There is some indication that more traditional forms of communication are dominating Internet users' attention, i.e. pornography.

If this trend continues, and if sites that have traditionally reinforced existing power relationships continue to thrive, will the Internet truly result in a more pluralistic and democratic means of communication? Using Traber's guidelines for ethical communication, it is apparent that pornography sites do not respect people as human beings; these sites are not designed nor intended for all human beings; they are not operated with a sense of respect and responsibility for others; and they do not reflect values that are held cross-culturally. In fact, on all counts, quite the opposite holds true. We have found in our investigation of Internet pornography sites that these sites reinforce traditional constructions of men's power over women in the forms of hierarchy, objectification, submission and violence. The meanings Internet pornography produces and the social discourses it constructs are relatively the same as those meanings and discourses about gender differences established in traditional forms of pornography.

Marvin goes on to point out in her study that media are not fixed objects, "they are constructed complexes of habits, beliefs, and procedures embedded in elaborate codes of communication" (Marvin, 1988: p. 8). There is nothing inherently good about any technology, let alone a new technology. Yet there is a tendency with any new technology to see it as a source of hope for a new utopia. With the Internet there are hopeful signs, yet it's brief history thus far has led us to question whether it can ever reach it's potential for enabling broader and deeper communication, or whether it will merely reify what we have seen and known of the past.

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WANTED: Your News Photo

Police Claims of Fair Use and the Protection of Digital Photos

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Abstract

WANTED: Your News Photo
Police Claims of Fair Use and the Protection of Digital Photos

Law enforcement's use of WANTED Web sites is creating new conflicts with the media. This paper examines two incidents in which police took news photos and posted them on their WANTED Web sites without permission of news organizations. This study finds that law enforcement may be successful in arguing for the fair use of such photography.

"WE NEED YOUR HELP!"

That was the plea from East Lansing police to visitors to their Web site after about 5,000 people rioted on the Michigan State campus in March 1999, distraught by the school's loss to Duke in a Final Four college basketball game.[1] More than a dozen news organizations recorded rioters on film as they set fires, smashed windows, and challenged police. Twenty-seven people were arrested.[2]

Less than six months later in Woodstock, N.Y., at the annual gathering of music artists and their fans, more than 200 youths destroyed tents and booths, knocked over light stands, a speaker tower, and a radio station truck. State police said five concert-goers were seriously injured and seven people were arrested on charges ranging from rioting to criminal mischief.[3] Again, news organizations on the scene to cover the end of the festival captured instead the mayhem of the riots.

In both instances, police were caught unprepared to deal with the violence and unable to arrest all the offenders. In an effort to prosecute those rioters who escaped the scene, East Lansing and New York State police employed a relatively new and troublesome tactic. Without permission, both agencies took news photos of the riot and published them on their "WANTED" Web sites.[4]

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[1] Greta Guest, *Judge Orders Newspapers to Give all Photographs of Riot to Prosecutors*, AP, April 5, 1999, available in The WIRE/Associated Press archive.
[2] Greta Guest, *Police Put Up Web Site, Seize Photographs to Catch Rioters*, AP, April 1, 1999, available in The WIRE/Associated Press archive.
[3] John Kekis, *Peace, Love, Music ... Then Arson, Vandalism as Woodstock '99 Winds Up*, AP, July 26, 1999, available in The WIRE/Associated Press archive.

In East Lansing, police displayed the photos in their "Halls of Shame" to encourage students to step forward and identify rioters.[5] To do so, authorities seized some photos from commercial film developers, some from private citizens and subpoenaed news organizations for others.[6]

East Lansing investigators confiscated five rolls of film taken by an AP freelance photographer from a film developer who reported the freelancer's photos to police.[7] Police posted these photos but removed them after attorneys for the freelance photographer contacted the Web site's Internet service provider and warned of possible copyright infringement.[8]

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[4] Ordinarily, published print news photos sought by police might be used in door-to-door investigatory work. In some instances, police might subpoena the photos or issue a search warrant to the news organization. This paper recognizes a difference between the use of published print photos during the course of an investigation and the reproduction of digital photos, used without permission, on a government Web site. That police may now act as publishers on the Web changes the nature of an age-old debate.

[5] Originally posted at <http://www.ci.east-lansing.mi.us/Riot/home.html>. The front page of the "Halls of Shame" site reads: "After the embarrassing riot of Saturday, March 27… WE NEED YOUR HELP! … This evening is a complete 'black eye' and embarrassment to our community. … One word describes this – ARSON, and it will not be tolerated!" *See* Appendix A.

[6] East Lansing investigators subpoenaed published and unpublished film and video from 19 news organizations. Several news organizations cooperated with investigators and handed over published material, but a dispute arose over the surrender of the unpublished material and that matter is before the Michigan Court of Appeals. *See* People v. Anthony David Pastor (99-89892AR). Ironically, material posted on the site comes with copyright warnings that the images are copyright protected.

[7] The confiscation of news photos from a film developer is equally troubling, but beyond the scope of this paper. *See East Lansing Police Give Freelance Photographer Birthday 'Gift,'* NEWS PHOTOGRAPHER, May 1999, at 27.

Within just a few days, more than 3,500 people visited the Web site, compared to about 145 telephone tips in the same period.[9] By May, *News Photographer* magazine reported that more than 60,000 people had accessed the site and police had more than 500 tips. By November, 132 people had been arraigned in East Lansing District Court.[10]

In Woodstock, 14 news photos of the riots were taken from The Associated Press and Syracuse Online without permission on July 30. They were removed Aug. 10 after a week of protests by news organizations to police and Gov. George Pataki.[11] The AP and Syracuse Online demanded their photos be removed, "arguing that their use violated copyright and blurred the separation between journalism and police work."[12]

As they took down the photos, New York State Police insisted they no longer needed them, but even if they had, their publication was a fair use. "We don't think we're violating the copyright or infringing on the copyright in this manner," said Glenn Valle, chief counsel for the state police. "It was material that was already published."[13]

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[8] *After Web Posts, Police Feared Copyright Infringement*, NEWS PHOTOGRAPHER, May 1999, at 30.

[9] Guest, *supra* note 2.

[10] *March Riot Activity Through Thursday, Nov. 4, 1999* (visited 11/28/99) <http://www.ci.east-lansing.mi.us/news/00-141.htm>.

[11] Larry Neumeister, *Police Remove Woodstock Photos from Web*, AP, Aug. 10, 1999, available in The WIRE/Associated Press archive.

[12] *Id.*

New York State investigators said by Aug. 10 the photos produced more than 150 e-mail responses. Arrests by the same date had increased to 39.[14]

The Internet is not only changing the way journalists and police conduct business, but it is also changing the nature of old conflicts between them. Internet news sites capture breaking news with minute-by-minute updates, complete with text, photos and video; police Web sites have become a high-tech alternative to the thumbtack and cork bulletin board at the local precinct.[15]

Digital images on the Internet, in particular, present special problems. They are routinely traded and distributed through online networks.[16] A large percentage of the photos available "represent a violation of someone's copyright. ... Many of these even bear a reference to the original source, in blatant disregard of the owner's exclusive rights. Many people feel there is no harm in scanning an image from a magazine or book and trading it with other users."[17]

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[13] *Woodstock Investigation Could Violate Law* (visited Aug. 26, 1999) <http://www.koin.com/news/stories/news-990802-233927.html>.

[14] Neumeister, *supra* note 11.

[15] One of the more prominent aggregators of law enforcement Web sites, Law Enforcement Online, has links to more than 3,000 agencies with Web sites. *See* Pima Community College Department of Public Safety, *Law Enforcement Online* (visited Oct. 20, 1999) <http://pimacc.pima.edu/dps/police.html>.

[16] EDWARD A. CAVAZOS & GAVINO MORIN, CYBERSPACE AND THE LAW: YOUR RIGHTS AND DUTIES IN THE ON-LINE WORLD 60 (1994).

This paper will examine some of the new copyright and fair use issues posed by copying digital news images on the Internet. Although there is no clear precedent, this paper will analyze related case law and will assess the viability of a fair use defense in the Woodstock and East Lansing cases.

Background and Literature Review

Copyright Protection for Photography on the Internet

Disputes over copyright of photography today are less likely to arise over the originality of the expression than over some of the rights guaranteed by copyright, most notably, reproduction, distribution, adaptations, performance and display.[18] In one of the few law review discussions about copyright protection for digital photos, Michael S. Oberman and Trebor Lloyd wrote that digital scanning technologies "make it inexpensive and easy to obtain high quality copies of a photographer's works, and to incorporate these photographs, or elements of these photographs, into new and different works."[19]

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[17] *Id.*

[18] The U.S. Supreme Court first afforded photography the same copyright protection as writing in 1884. In Burrow-Giles Lithographic Co. v. Sarony (111 U.S. 53), the Supreme Court decided that a portrait photographer was not simply operating a machine. The Court said the photographer was involved in an active creative process "entirely of his own original mental conception." Since the decision, "photographer's choices of subject matter, lighting, and camera angle have repeatedly been found [by courts] to comprise a creative expression that makes a photograph more than a mechanical fixation lacking originality." See Michael S. Oberman, Esq. and Trebor Lloyd, Esq., *Copyright Protection for Photographs in the Age of New Technologies*, 2 B.U. J. SCI. & TECH. L. 10¶1.

Oberman and Lloyd argued that multiple infringements are likely in the copying and reuse of photography. For example, the initial scanning of an image may constitute one infringement. In *Curtis v. General Dynamics Corp.*, the court found that a copy of a photo used to make a "mock-up" for an ad was a second infringement and the use of the photo in the ad was a third infringement.[20] More recently the decision in *Playboy Enterprises, Inc. v. Frena*[21] suggests that even "the display of photographic images on a computer screen, and the downloading of these images, might be an infringement of the photographer's or copyright holder's rights of display and distribution."[22] Few cases involving the digital scanning of photographs have been litigated, and none has been judicially resolved.[23]

Oberman and Lloyd wrote that the use of digital photos may appear infringing but may be protected under the "fair use" doctrine, which allows for new uses of protected works: "It is within the area of fair use that the user's desire to exploit new technologies, and the photographer's interest in the control and marketing of the original work are likely to be resolved."[24]

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[19] *Id.* at ¶ 2.
[20] 18 U.S.P.Q 2d(BNA) 1608 (W.D. Wash. 1990).
[21] 839 F Supp. 1552 (1993)
[22] Oberman & Lloyd, *supra* note 18, at ¶13.
[23] *Id.* at ¶5.

The 1976 Copyright Act codified the common law principles of fair use. The four fair use factors are:[25]

> (1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
>
> (2) the nature of the copyrighted work;
>
> (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
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> (4) the effect of the use upon the potential market for or value of the copyrighted work.

Judge Pierre N. Leval, formerly a U.S. district court judge for the Southern District of New York, now a judge on the Second Circuit Court of Appeals, wrote that although there is no simple definition of fair use, there are basic principles by which the courts can be guided:

> Briefly stated, the use must be of a character that serves the copyright objective of stimulating productive thought and public instruction without excessively diminishing the incentives for creativity. ... In analyzing a fair use defense, it is not sufficient simply to conclude whether or not justification exists. The question remains how powerful, or persuasive, is the justification, because the court must

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[24] *Id.* at ¶15.
[25] *See* Copyright Act of 1976, 17 U.S.C. § 107 (1990).

> weigh the strength of the secondary user's justification against factors favoring the copyright owner.[26]

But the literature on fair use, and more recently the literature on its application to the Internet, is less confident of the court's ability to reach an equitable outcome, and has produced recommendations to courts and legislators that even the recommenders can't seem to agree on.[27] Even Judge Leval wrote that judges do not agree on the meaning of fair use and "reversals and divided courts are commonplace."[28] Melville Nimmer, the dean of copyright lawyers and scholars, used in his casebook a cartoon of a pilgrim scaling the mountains only to ask the old sage, "What is 'fair use'?"[29]

One of the main criticisms of fair use is that it relies too heavily on the individual facts of the case, which can be construed to fit the fair use factors the courts find convenient to their decision.[30] Since the fair use doctrine was codified in the Copyright

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[26] Pierre N. Leval, *Toward a Fair Use Standard*, 103 HARV. L. REV. 1105, 1110-1111 (1990).

[27] The Conference on Fair Use (CONFU), under the leadership of President Clinton's Information Infrastructure Task Force, was organized in 1994 to discuss fair use issues and develop guidelines. According to the report, "Some working groups succeeded in drafting proposals for guidelines which were acceptable to a broad range of participants. Others were not as successful in drafting proposals for guidelines acceptable to a broad cross-representative number of CONFU participants. In some areas, participants felt that the time was not yet ripe to write actual guidelines since the technology was still evolving and the marketplace was still experimenting with how to deal with these issues. In other areas, there was no clear consensus on how to draft guidelines, or whether, in some cases, guidelines were even necessary."

[28] Leval, *supra* note 26, at 1106 -1107.

[29] Lloyd L. Weinreb, *Fair's Fair: A Comment on the Fair Use Doctrine*, 103 HARV. L. REV. 1137 (1990).

[30] *See* David H. Kramer, *Who Can Use Yesterday's News? Video Monitoring and the Fair Use Doctrine*, 81 GEO. L.J. 2345, 2348 (1993) (arguing that the fair use doctrine "provides no guidance as to how to balance these elements" and citing two separate panels of the Court of Appeals for the Eleventh Circuit that ruled differently on whether video monitoring is a fair use of a copyrighted newscast).

Act of 1976, the Supreme Court has decided three major cases involving its principles.[31] In the most recent case, *Campbell v. Acuff-Rose Music, Inc.* even the Court admitted, "The task is not to be simplified with bright-line rules, for the statute, like the doctrine it recognizes, calls for case-by-case analysis."[32]

In the first fair use case raised by a news organization's Web site, a federal judge recently rejected the fair use defense of another site that posted news articles without permission. The Los Angeles Times and Washington Post newspapers filed a copyright infringement suit against Freerepublic.com, a conservative Web site that has posted thousands of news articles without permission so that users may comment on them. A Los Angeles Times article described the ruling as one "that could shape how copyright laws are applied in cyberspace."[33] The Free Republic asked for the case to be dismissed, claiming fair use. Judge Margaret Morrow rejected the request and said The Free Republic was not entitled to assert a fair use defense. She agreed with the newspapers that Free Republic's activities are harming the newspapers' own Web site business.

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[31] Sony Corp. of America v. Universal City Studios, Inc., 464 U.S. 417 (1984); Harper & Row v. Nation Enterprises, 471 U.S. 539 (1985); and Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569 (1994).
[32] 510 U.S. 569, 577 (1994).
[33] Greg Miller, *Judge Rejects 'Fair Use' of News Protection*, LOS ANGELES TIMES (visited Nov. 9, 1999) <http://www.latimes.com>.

The majority of scholars and writers say the success of a fair use defense on the Internet is not yet clear.[34] These scholars argue that copying is easier than it has ever been, but the barriers to obtain and afford licensing for protected content are more prohibitive.[35] Professor I. Trotter Hardy, in a 1998 report for the U.S. Copyright Office, argued that the Internet has made the methods of infringement cheaper for infringers and harder for copyright owners to discover. He calls this "decentralized infringement," the "phenomenon of falling reproduction costs resulting in widening dispersal of reproduction activities."[36] Fair use is one remedy, he argues, because it is difficult, if not impossible, to punish the decentralized infringer.

David Kramer, citing Professor Wendy Gordon, describes the rampant copying on the Internet as "market failure" and identifies the fair use doctrine as a device by which courts may resolve such failure. He takes an economist's approach, defining three conditions under which a fair use finding is appropriate:

> (1) The defendant could not appropriately purchase the desired use through the market.

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[34] Jonathan Evan Goldberg, *Now That the Future Has Arrived, Maybe the Law Should Take a Look: Multimedia Technology and Its Interaction With the Fair Use Doctrine*, 44 AM. U.L. REV. 919, 924 (1995).
[35] *Id.* at 936; See also Kramer, *supra* note 30 at 2354 (analyzing the fair use doctrine from an economist's point of view and arguing that fair use corrects market failures); Susan Orenstein, *Digital Multimedia Madness*, AMERICAN LAWYER NEWS SERVICE, Sept. 13, 1993, S29, 5 (writing that litigation may seem inevitable because multimedia developers take more risks with copyright).
[36] I. TrotterHardy, *Project Looking Forward: Sketching the Future of Copyright in a Networked World*, Final Report to the U.S. Copyright Office, 17 (1998).

(2) Transferring control over the use would serve the public interest; and

(3) The copyright owner's incentives would not be substantially impaired by allowing the user to proceed.[37]

"Market failure" is commonplace on the Internet. The online mechanisms for receiving permission to copy a photo or to buy a license for it are currently limited. When such mechanisms are in place, they can be cost prohibitive and restrictive, undermining the intent of copyright law to serve the public's interest in free access to information. Seen this way, the success of a fair use defense for Internet-obtained material is viable, provided there is a significant public interest and the copyright owner's own incentives are not harmed.

The literature also addresses the changing definition of the first fair use factor, "purpose and character of the use." In *Campbell*, the Court said a "transformative" derivative work that uses elements of pre-existing works might be fair use, even if the use is commercial. The question in *Campbell* was whether 2 Live Crew's parody of Roy Orbison's song, "Oh, Pretty Woman," was a fair use. The Court said it was; the work was "transformative" because it added "something new, with a further purpose or different character, altering the first with new expression, meaning or message."[38]

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[37] Kramer, *supra* note 30, at 2353.
[38] 510 U.S. 569, 579 (1994).

Although parodies and photos are not similar expressions, Oberman and Lloyd suggest the Court's ruling in *Campbell* means that copying a digital photo in its entirety reveals a lack of transformative character in the new derivative work, making the new work an infringement.[39] Conversely, altering a photo in a computer program such as Adobe Photoshop or presenting the photo with a new purpose may make it sufficiently "transformative." However, the Court in *Campbell* said if the work "being copied merely avoided 'the drudgery in working up something fresh,' the other fair use factors, such as the commercial nature of the derivative work and the derivative work's ability to serve as a market substitute for the copyright holder's work, 'loom larger.'"[40]

Oberman and Lloyd's analysis leads them to reconstruct the fair use factors for the reproduction of digital photography and ask these four questions:[41]

> (1) To what extent does the second use transform the original photograph and what is the purpose of the use?
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> (2) To what extent will the original photograph be viewed as a highly creative work?[42]
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> (3) To what extent does the second work quantitatively and qualitatively utilize the original photograph?

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[39] Oberman & Lloyd, *supra* note 18 at ¶17.
[40] 510 U.S. 569, 580 (1994).
[41] Oberman & Lloyd, *supra* note 18 at ¶19.
[42] Oberman and Lloyd note that "as a general rule, a creative work is insulated from the fair use defense more than a factual work." The authors cite Time Inc. v. Bernard Geis Associates, 293 F. Supp. 130, 146 (S.D.N.Y.1968): "Where an amateur's film captured a momentous, and otherwise inadequately recorded, event in history, the public's interest in viewing the pictorial record of that event was found to outweigh the photographer's copyright interests." *Id.* at ¶19.

(4) To what extent does the second use fit within the customary markets for the original photograph?

Government Claims of Fair Use

There are few traditional claims of fair use by government and even fewer copyright suits against the government. However, the 1998 Digital Millennium Copyright Act may change that by giving the government more flexibility in claiming fair use of materials on the Internet.

In *Time, Inc. v. Bernard Geis Associates*, the court said, "There appears to be no privilege for the United States to use copyrighted material without the consent of the owner."[43] According to William Patry, the Copyright Act makes states and their instrumentalities liable for copyright infringement.[44] Citing legislative reports, Patry wrote that only a reproduction for legislative or judicial proceedings may be a fair use.[45] He quotes a House report from 1976:

> The Committee has considered the question of publication, in Congressional hearings and comments, of copyrighted material. Where the length of the work or excerpt published and the number of copies authorized are reasonable under the circumstances, and the work itself is directly relevant to a matter of legitimate legislative concern, the Committee believes that the publication would constitute fair use.[46]

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[43] 293 F. Supp. 130, 134 (S.D.N.Y. 1968).

[44] William Patry, The Fair Use Privilege in Copyright Law 486 (1995). *See also* 17 U.S.C. §§501 (a), 511 (1990).

[45] *Id.*

[46] H.R. Rep. No. 1476, 94th Cong., 2d Sess. 65 (1976) at 73, reprinted in Patry at 485.

He mentioned two cases in which private copyright holders challenged state governments and lost. In both cases, the public interest was deemed significant enough to allow the state to make a claim of fair use.[47]

New Internet regulation indicates a stronger trend toward exempting government from copyright infringement by creating specific fair use exceptions. The Digital Millennium Copyright Act (DMCA) was passed in 1998 by Congress to limit the liability of online service providers and provide additional protections for online copyright holders. It contains an exception for law enforcers who circumvent digital copyright protections to "address the vulnerabilities of a government computer, computer system, or computer network."[48] Similarly, two congressional bills that seek to regulate the unauthorized copying of digital databases also contain provisions protecting government agencies from infringement claims when such copying is used for the purpose of "investigative, protective or intelligence activities."[49]

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[47] *See* Jartech, Inc. v. Clancy, 666 F.2d 403 (9th Cir.), *cert. denied*, 459 U.S. 826 (1982) (holding that the Santa Clara County's surreptitious photographing and audio recording of an adult motion picture was a fair use). *See also* Association of American Medical Colleges v. Cuomo, 928 F.2d 519 (2d Cir. 1991), and College Entrance Examination Board v. Cuomo, 788 F. Supp. 134 (N.D.N.Y. 1992) (ruling the use of copyrighted standardized tests by the state of New York was permissible. However, neither court ruled that the use was fair).

[48] DMC Act, §1201(e) and 1202(d).

[49] H.R. 1858, 106th Cong., §103C (1999).

Scholars argue that such legislation empowers the copyright holder by increasing penalties and fines for infringement and by granting copyright holders the right *and* the ability to completely control access to their works for the first time in copyright history.[50] Indeed, it may also empower government in its list of fair use exceptions.

Research Questions, Method and Limitations

To understand the issues presented by law enforcement's use of digital news photos, this paper will address whether the use of news photos by police in East Lansing and Woodstock can be considered a fair use and what the implications are for news organizations.

This paper will use traditional legal research methods involving case and statute analysis in the Woodstock and East Lansing cases. Specifically, this paper will analyze the fair use doctrine and its current application as redefined by the U.S. Supreme Court in *Campbell v. Acuff-Rose Music, Inc. (1994).*

Because the use of online news photography in criminal investigations has not been brought before the courts, this analysis is limited by the facts of the East Lansing and Woodstock cases and the law's untested applications on the Internet.

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[50] *See* Sharon Appel, *Copyright, Digitization of Images, and Art Museums: Cyberspace and Other New Frontiers,* 6 UCLA ENT. L. REV. 149, 210 (1999). *See also The Criminalization of Copyright Infringement in the Digital Era,* 112 HARV. L. REV. 1705, 1706 (1999).

Law Enforcement and Fair Use

"There are two concerns for the press in this circumstance," said Robert Penchina of Rogers & Wells, whose firm represented The Associated Press in both the East Lansing and Woodstock disputes. "One is the intellectual property rights. And that comes down to, 'Is this a fair use or isn't it?' But the second concern, which is a non-copyright concern, is … is this something appropriate as a matter of public policy for the police to be doing?[51]

This paper will address the first concern: whether the use of digital news photos in East Lansing and Woodstock was fair. It will match the facts of the East Lansing and Woodstock cases against each of the four fair use factors and their most recent interpretations by the courts to determine whether the police in both cities might have a viable fair use defense. The second issue raised by Penchina is equally important, but beyond the scope of this paper. Some thoughts on the public policy questions raised and areas for further research, however, are addressed in the conclusion.

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[51] Telephone interview with Bob Penchina, attorney, Rogers & Wells (Nov. 19, 1999).

Purpose and Character of the Use

In such an analysis, the courts have emphasized that none of the four factors should be treated separately: "All are to be explored, and the results weighed together, in light of the purposes of copyright."[52]

The complete introduction and first factor as stated in Section 107 of the 1976 Copyright Act are:[53]

> Notwithstanding the provisions of section 106, the fair use of copyrighted work, including such use by reproduction in copies or phonorecords or by any other means specified by that section, for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright. In determining whether the use made of a work in any particular case is a fair use the factors to be considered shall include —
>
> (1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;

The "purpose and character of use" factor was most recently expanded upon by the Supreme Court in *Campbell v. Acuff-Rose*, a 1994 case in which the Court ruled that 2 Live Crew's parody of Roy Orbison's song, "Oh, Pretty Woman," was a fair use. In examining the rap band's purpose and character of the use of Orbison's song, the Court said the new work must be "transformative." It must "add something new, with a further purpose or different character, altering the first with new expression, meaning or message. … Although such transformative use is not absolutely necessary for a finding of fair use, the goal of copyright, to promote science and the arts, is generally furthered by the creation of transformative works."[54]

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[52] Campbell v. Acuff-Rose Inc., 510 U.S. 569, 577 (1994).
[53] *See* Copyright Act of 1976, 17 U.S.C. §107 (1990).

The commercial or non-commercial nature of the use is also an important determination in the first factor, although since *Campbell*, courts have been careful to point out that a non-commercial use doesn't necessarily mean a use is fair nor does a commercial use necessarily mean the use isn't fair.[55] In *Campbell*, the Court criticized the Court of Appeals for confining its analysis to the commercial nature of the band's use, relying only on the Court's dicta in *Sony v. Universal* that "every commercial use of copyrighted material is presumptively…unfair…"[56] In that 1984 case, the Court ruled that the use of Betamax machines to tape copyrighted TV programs was a fair use; "time shifting" of such taped programming was ruled to be a non-commercial public benefit.

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[54] 510 U.S. 569, 579 (1994).

[55] In *Infinity v. Kirkwood*, 26 Med L. Rptr. 2045 (1998), the court ruled that Kirkwood's retransmission of Infinity's radio broadcasts by telephone was not a fair use. The transmissions were used by talent scouts, ad agencies and others to evaluate talent and hear that commercials were played. The court ruled that Kirkwood's use was clearly commercial, but was careful not to weigh the factor too heavily: "While we agree that commerciality should not be overemphasized, neither should it be ignored." *In American Geophysical Union v. Texaco Inc.*, 60 F. 3d 913 (1994), the Third Circuit Court of Appeals criticized the district court for allowing the "for-profit nature of Texaco's activity weigh against Texaco" in determining the first factor, even though the court ultimately ruled that Texaco's copying of articles from the plaintiff's magazines was not a fair use.

[56] 464 U.S. 417, 451 (1984).

In the Woodstock and East Lansing cases, it appears this first factor would weigh in favor of the police. The use of news photography by police was decidedly non-commercial — in both cases, police used news photos for the purpose of enlisting the public's help in identifying riot suspects. Was the use transformative? Not in the sense that the second use looked different — the photos used by the police were the same photos taken by news organizations — but courts might accept the argument that the WANTED Web sites created a "further purpose" by "altering the first (use) with new expression, meaning or message." The WANTED Web sites used the photos as investigatory tools in apprehending criminals.

Furthermore, although law enforcement is not a specifically mentioned exception in the Copyright Act's introduction to the four fair use factors, it fits within the framework for exception as defined by Judge Leval. The justification for use — in this instance, crime fighting — must be "persuasive" and must stimulate "productive thought and public instruction."[57]

Indeed, exceptions for law enforcement online are being legislated. The 1998 Digital Millennium Copyright Act, which provides for "adequate and effective protection against circumvention of technological measures used by copyright owners to protect their works," exempts law enforcement from penalties for circumventing such technologies:[58]

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[57] Leval, *supra* note 26, at 1110-1111.

> This section does not prohibit any lawfully authorized investigative, protective, information security or intelligence activity of an officer, agent or employee of the United States, a State, or a political subdivision of the State, or a person acting pursuant to a contract with the United States, a State, or a political subdivision of a State [from using technology to circumvent copyright management systems]. For the purposes of this subsection, the term "information security," means activities carried out in order to identify and address the vulnerabilities of a government computer, computer system, or computer network.

While this law — and other proposed legislation[59] — specify crises involving government computers, the language is indicative of a general trend in legislation toward governmental fair use of digital material for important societal purposes.

The Nature of the Work

The second fair use factor is "the nature of the copyrighted work."[60] In *Sony*, the Ninth Circuit noted that "legislative history and the case law dealing with this factor are rather sparse."[61]

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[58] *U.S. Copyright Office Summary of The Digital Millennium Copyright Act of 1998* (visited Oct. 20, 1999) <http://lcweb.loc.gov/copyright/legislation/dmca.pdf>.

[59] H.R. 354, a bill proposed by Rep. Howard Coble (R-NC), is designed to deter database piracy by imposing new federal civil and criminal penalties. Section 1404 of the bill exempts "collections of information gathered, organized or maintained by or for a government entity, whether federal, state or local..."

[60] *See* Copyright Act of 1976, 17 U.S.C. §107 (1990).

[61] 659 F2d. 963, 972 (1981).

Harper & Row, Publishers, Inc. v. Nation Enterprises provides some guidance, although as with the other factors, there is room for debate: "The law generally recognizes a greater need to disseminate factual works than works of fantasy or fiction."[62] In *Harper*, the Court ruled that the Nation's use of an unpublished portion of Gerald Ford's autobiography was not a fair use. Indeed, the Court said that an unpublished work is "a critical element of its nature" and that the "scope of fair use is narrower with respect to unpublished works." [63]

In Woodstock and East Lansing, the nature of the work was published on the Web and did not raise this "critical element." Furthermore, while the photos were copyrighted works of original expression, the content of the photos was factual in nature: scenes of rioters in the act of rioting. Again, it appears this factor would favor an argument of fair use by police.

The Amount Used

The third factor weighs "the amount and substantiality of the portion used in relation to the copyrighted work as a whole."[64] In *Harper*, the Court acknowledged that although the unpublished portion used by the Nation was only 300 to 400 words, the magazine "took what was essentially the heart of the book."[65] In *Campbell*, the Court said the third factor "will harken back to the first of the statutory factors, for, as in prior cases, we recognize that the extent of permissible copying varies with the purpose and character of the use."[66]

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[62] 471 U.S. 539, 563 (1984).
[63] *Id.* at 564.
[64] *See* Copyright Act of 1976, 17 U.S.C. §107 (1990).

In *Campbell*, the Court ruled that the purpose and character of the use of Orbison's song was a parody. Although Acuff-Rose argued that 2 Live Crew had taken the heart of the song, the Court said, "copying does not become excessive in relation to parodic purpose merely because the portion taken was the orginal's heart."[67] Thus, the court linked the amount taken not only to the whole but also to the purpose. The analysis then becomes whether the amount taken is in keeping with the purpose, as long as the purpose is deemed fair.

If the purpose of identifying riot suspects is fair, it follows that the use of the entire photo or photos in Woodstock and East Lansing would constitute a fair amount, even if each individual photo was the "heart" of the news story. Something less than the use of the full photo or photos would not be possible to make the use transformative. However, such an argument might proceed only after a case-by-case analysis of each photo under question. For instance, a court might find some photos serve the purpose better than others, thereby determining what amount might be fair.

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[65] 471 U.S. 564, 565 (1984).
[66] 510 U.S. 569, 586-587 (1994).
[67] *Id.* at 588-589.

The Market Effect

The final factor for analysis is "the effect of the use upon the potential market for or value of the copyrighted work."[68] While historically this factor has been seen as the most important of the four, the Supreme Court clarified its position in *Campbell* and stated that the four factors must be "weighed together."[69]

Campbell also clarified some confusion created by *Sony* as to whether the commercial or non-commercial nature of the use "presumptively" determined the fourth factor:

> What Sony said simply makes common sense: when a commercial use amounts to mere duplication of the entirety of an original, it clearly 'supercedes the objects,' of the original and serves as a market replacement for it, making it likely that cognizable market harm to the original will occur. But when, on the contrary, the

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[68] *See* Copyright Act of 1976, 17 U.S.C. §107 (1990).
[69] 510 U.S. 569, 577 (1994).

> second use is transformative, market substitution is at least less certain and market harm may not be so readily inferred.[70]

This last factor presents the most conflict in an analysis of the Woodstock and East Lansing cases. It is debatable whether WANTED Web sites injure the market for online news sites. Are online users more likely to seek out police sites about a riot than news sites? That's difficult to know. However, if it can be successfully argued that the non-commercial use of news photos by police is transformative, it follows by *Campbell's* logic that the market is less likely to be harmed. Furthermore, while news organizations regularly resell their photos to non-news organizations, the regular sale of photos to law enforcement is not a market news organizations have demonstrated an interest in exploiting, so under *Campbell's* reasoning, no potential harm exists either. Thus, this fourth factor appears to favor the police.

Conclusion

As Web site publishers, the police are entering new territory, creating new conflicts between the media and law enforcement. This study suggest that as Internet publishers with WANTED Web sites, the police may attempt to use digital news material and claim news defenses, such as fair use, in using such materials without permission. In the East Lansing and Woodstock cases, it appears the police may have a viable fair use defense in light of the changing interpretations of fair use.

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[70] *Id.* at 591.

The questions surrounding the issue of fair use on the Internet is reminiscent of fears that like the Betamax in *Sony*, the Internet will change the balance of power between the copyright holder and user. Indeed, it will, as technology has done throughout time. As the Court in *Sony* noted:

> From its beginning, the law of copyright has developed in response to significant changes in technology. Indeed, it was the invention of a new form of copying equipment — the printing press — that gave rise to the original need for copyright protection. Repeatedly, as new developments have occurred in this country, it has been the Congress that has fashioned the new rules that new technology made necessary.[71]

So if the police are successful in arguing a fair use claim, what defenses are available to news organizations? Although state shield laws and judicial decisions offer some protections to journalists who endeavor to keep their activities separate from law enforcement, such protections are not absolute and are not specific about the use of online news materials. Further research in this area is needed.

More immediately, news organizations need to consider technologies to protect their content. Often, the best remedies lie not in regulation but in the advancement of the technology itself. In particular, digital watermarking technologies offer news organizations the ability to deter counterfeiting, piracy and other unauthorized uses. Digital watermarks are software that embed bits into digital content that only the user can see, allowing the user to track the content on a network or the Internet. Companies such as Digimarc offer several kinds of watermarking technologies, although the costs can be prohibitive.

Such costs, however, should not be a deterrent. As the potential for infringement on the Internet increases, the risk to the value and integrity of news content also grows.

Appendix A

March Riot

Investigative Task Force

After the embarrassing riot of Saturday, March 27...
WE NEED YOUR HELP!

If you have any information on the individuals pictured on this site, please call 517-337-2599!

During the evening and early morning hours of March 27/28, 1999, The City of East Lansing experienced a major Civil Disturbance. This evening is a complete "black eye" and embarrassment to our community - both permanent residents and students. Multiple Police Agencies had to be called in for assistance. Now we need your HELP -ASAP!

Many lives were placed in danger as a result of this incident.

Countless fires were set throughout the City and MSU. One word describes this -ARSON, and it will not be tolerated!

Tens of thousands of dollars in damage was done throughout the City and MSU. This "Willful Conduct", in legal terms is called "MALICIOUS DESTRUCTION OF PROPERTY", and again, will not be tolerated!

WE NEED YOUR HELP! PLEASE ASSIST THE FINAL FOUR INVESTIGATIVE TASK FORCE IN IDENTIFYING THOSE SUBJECTS INVOLVED IN THESE INCIDENTS.

Please visit the "Hall of Shame" to help identify suspects.

Then visit the "Tip Page" to submit a tip.

You can also use our toll free tip li - 1-877-ELPD TIP.

TOLL FREE

All materials are copyright 1999 ©
The City of East Lansing

BEST COPY AVAILABLE

Halls of Shame

Click a hall to see pictures:

Hall 1

Hall 2

Hall 3

Hall 4

Hall 5 NEW!

The Hall of Shame 5

The purpose of the pictures is to help identify and apprehend criminals. Any use other than this intended purpose is strictly prohibited. Copyright protected, 1999.

All individuals in the "HALL OF SHAME" are suspects.
They have not been charged with any criminal violations.
All suspects are presumed innocent until proven guilty.

Click on photos with left mouse button to see full size view.

File: 187-C-O.jpg
Size: 17.1KB

Wanted for: Indecent Exposure

File: 32799-71.JPG
Size: 187.3KB

Wanted for: Incite to riot

File: 32799-72.JPG
Size: 168.7KB

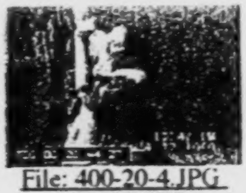
Wanted for: Incite to riot

File: 332.JPG
Size: 87.5KB

Wanted for: MDOP Police Property/Incite to riot

File: 332-O.JPG
Size: 77.8KB

Wanted for: MDOP Police Property/Incite to riot


File: 400-20-4.JPG
Size: 12.6KB

Wanted for: Incite to riot

File: CD6-1-12.JPG
Size: 16.2KB

Wanted for: Incite to riot

File: CD6-1-16.JPG
Size: 15.4KB

Wanted for: Arson/Incite to riot

File: CD6-1-17.JPG
Size: 17.3KB

Wanted for: Incite to riot

File: CD6-1-35.JPG
Size: 14.2KB

Wanted for: Incite to riot

File: CD6-1-39.JPG
Size: 19.0KB

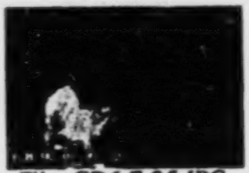
Wanted for: Incite to riot

File: CD6-22-3.JPG
Size: 18.6KB

Wanted for: Incite to riot/MDOP

File: CD6-51-2.JPG
Size: 14.3KB

Wanted for: Incite to riot/MDOP


File: CD6-7-35.JPG
Size: 10.9KB

Wanted for: Indecent exposure

File: CD6-T153.JPG
Size: 20.4KB

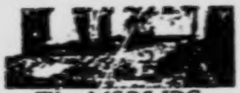
Wanted for: Incite to riot/MDOP

File: CD6-TNB.JPG
Size: 20.1KB

Wanted for: Incite to riot/indecent exposure

BEST COPY AVAILABLE

File: IEX2.JPG
Size: 22.0KB



File: MSP5.JPG
Size: 62.6KB

File: WXMI-513.JPG
Size: 11.6KB

Wanted for: MDOP/LFA

File: 20-44-03.jpg
Size: 59KB

Wanted for: Incite to riot

File: V30-1-12.JPG
Size: 13.9KB

Wanted for: Arson

File: V30-1-13.JPG
Size: 13.7KB

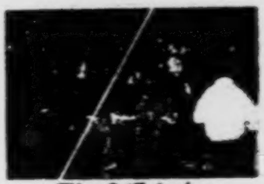
Wanted for: Arson

File: V30-1-35.JPG
Size: 14.2KB

Wanted for: Incite to riot

File: V30-51-2.JPG
Size: 14.3KB

Wanted for: Incite to riot/MDOP



File: 347-1a.jpg
Size: 25KB

Wanted for: Incite Riot/MDOP

File: 436-6.jpg
Size: 21KB

Wanted for: Incite Riot

File: 436-9a.jpg
Size: 25KB

Wanted for: Incite Riot/Arson

File: 84-33a.jpg
Size: 21KB

Wanted for: Incite Riot/MDOP

DO NOT COPY THESE PICTURES FOR YOUR OWN USE

Please call 517-337-2599

for any information you may have about the people in these pictures.
You can also arrange to see the actual pictures if these are not clear enough.
You may remain anonymous at all times.

TOLL FREE TIP LINE

1-877-ELPD TIP

Go to Hall 1, Hall 2, Hall 3, Hall 4

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Opinions online: The extension of computer-mediated communication for survey research in research organizations

by

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Opinions online: The extension of computer-mediated communication for survey research in research organizations

Abstract

The extension of computer-mediated communication tools for survey research is revolutionizing the research industry. The growth rate of online research suggests the Internet may become the most widely used communications tool for conducting research (CustomerSat.com, 1997). The present study used an e-mail survey of 27 executives to understand the perception and use of online survey methods within their research organizations. Because the literature has yet to examine the use of online surveys throughout the industry, this study is both exploratory and descriptive.

Opinions online: The extension of computer-mediated communication for survey research in research organizations

As the newest and most dynamic survey research tools, online surveys and other computer-mediated communication methods are revolutionizing the research industry. The use of traditional methods such as phone interviews and mail surveys is giving way to online surveys, which can be conducted by posting a survey on a secure Web site or sending the survey via e-mail. In addition, focus groups and in-depth interviews are conducted in cyberspace. In 1997, it was estimated that over 2 million interviews were conducted online in the United States (Kottler, 1998). Internet market research is expected to generate $72.4 million in revenues in 1999, a 155 percent increase over 1998 figures, and $170 million in 2000 (*Inside Research*, 1999 as cited in James, 1999). The current growth rate of online survey research suggests that the Internet may soon be the most widely used tool for conducting market research (CustomerSat.com, 1997).

Online usage was estimated in April of 1999 to be 83 million U.S. adults, representing 40 percent of the 16 and older population (IntelliQuest Research, 1999). The same study predicted that U.S. users could reach 100 million in the year 2000. The tremendous growth rate of online usage has not been overlooked by researchers who are examining the use of the Internet as a conduit for research.

The challenge for researchers is to demonstrate that online surveys are a valid and reliable method for collecting data and to learn how to motivate potential respondents on the Internet. The present study was both exploratory and descriptive in assessing how online surveys are currently being used in market research organizations. In addition, this paper provides a detailed summary of the issues discussed in trade and academic journals concerning online surveying.

Literature Review

Benefits

Industry experts have published a number of articles in trade publications detailing the benefits and limitations of research using online surveys. A review of this literature revealed that online surveys offer a number of benefits when compared to more traditional quantitative methodologies, such as telephone or mail surveys. These benefits include:

- Cost: Online surveys are often less costly than traditional surveys, particularly for large sample sizes (Kottler, 1997), and this cost savings may represent as much as 40 percent of the cost of traditional methods (Rosenblum & Grecco, 1998). Many costs associated with traditional methodologies are either eliminated or reduced online. In addition, sample sizes can be increased at a minimal incremental cost.
- Speed: Fieldwork and data tabulation are often faster than with traditional methods.
- Breadth and depth: Questionnaires and responses may be longer and more detailed than traditional methods.
- Multimedia capabilities: Company logos, packaging prototypes, print ads, video, and audio can all be included in the survey.
- Reach: Online surveys allow the researcher to access populations that are difficult to reach through traditional methods, particularly high-level, high-tech professionals.
- Accessibility: As with mail surveys, respondents can complete the survey when it is most convenient for them.
- Control: Unlike telephone surveys or in-person interviews, online surveys lack interviewer bias.
- Modification potential: Online surveys can be quickly modified in a matter of minutes. Changing a survey midstream would be an impossible task with a mail survey and difficult with a telephone questionnaire.

- Integrity of data: A recent study found that people are more likely to answer questions honestly while interacting with a computer rather than with a person (as cited in Nadilo, 1998).
- Real-time access to results: Researchers and clients can monitor results through timely charts and tables on password-protected Web pages throughout the surveying process.
- Ease of use: A keyboard and mouse interface make answering surveys less tiring than mail surveys and faster than having questions read as in telephone surveys.

Limitations

Every methodology, including online surveys, will have its limitations. The most significant problem facing the implementation of this method is:

- Representation: The population of Internet users is not yet representative of the U.S. population. Although Internet users are becoming increasingly more representative, the general consumer population may not be accurately represented using an online survey at the present time.

The suitability of online research is determined by the degree of "connectedness" of the respondent base, which has been increasing as a result of three current trends (CustomerSat.com, 1997). First, more Internet-based businesses are emerging and their customer base will be derived from those connected to the Internet. Second, it is becoming practical for companies to take advantage of e-mail technology for internal communication purposes through the Internet or an Intranet. Finally, with the rapid growth of online users, Internet-based surveys are increasingly becoming more practical.

Certain targeted populations are a good fit for the use of this methodology. The Henley Centre on Media Futures (1996) suggested that the following subsets of the population are appropriate target groups for online research:

- Computer products purchasers
- Web site visitors
- Academics

- Users of Internet services
- Early adopters of this new technology
- ·Employees of a "wired" company

Other targeted populations include employees in the technology industry, employees and customers of Internet-based businesses, and employees with access to corporate e-mail or an Intranet (CustomerSat.com, 1997). In addition, consumers who have made online purchases also represent a population that can be surveyed online (Watt, 1997). This method is best used as a way to survey a sample of a known group where Internet access has achieved 100 percent penetration.

Another current limitation of this method is the:

- Hesitation to divulge information: Respondents who would provide certain information in a telephone or mail survey may be wary of divulging this same information electronically as a result of security and privacy concerns. This resistance is expected to diminish over time as people become more comfortable with this new technology (Weissbach, 1997).

Although online surveys have some limitations, the benefits may outweigh the problems. Online surveys are currently an effective means of collecting data when the survey population matches the demographics of online users. As the Internet continues to attract a larger percentage of the general population, the sample of respondents completing online surveys will become more representative of the U.S. population.

Format

The four most popular methods for online surveys are e-mail surveys, Web surveys, converted computer-assisted telephone interviewing (CATI) systems, and downloadable surveys.

With traditional e-mail surveys, a respondent receives a survey within an e-mail document using ASCII text. The respondent types directly onto the survey, typically using X's for closed-ended questions, and returns the survey to the researchers either by e-mail or sometimes by mail or fax. These surveys can either be sent directly to the intended respondent, to a general e-mail account to be forwarded to the appropriate respondent, or posted to a newsgroup.

The benefits of e-mail surveys include the speed and simplicity of development. This type of survey is also inexpensive to construct. In addition, users of Eudora or another non-Web systems will not have to connect to the Internet to complete an e-mail survey (Gucwa, 1999). However, the survey is limited to plain text and cannot contain graphics. Skip patterns are not automatic and the respondent must follow instructions for skipping, which may result in illegal skip patterns. The respondent can also alter the instrument and there are no internal checks for validity. The result is that the quality of the data is affected and data cleaning is required. Unless a third-party research organization is used, confidentiality issues arise because the respondent's e-mail address is attached to their responses. E-mail surveys are best used for an internal audience (CASRO, 1998). These surveys are also best used when the survey is short (5-6 questions) with no open-ended questions.

Web surveys are hosted either on an internal server or at a service bureau. Often, invitations to participate are sent directly to intended respondents through e-mail or traditional mail. Respondents access a Web survey directly from a Web site or through an e-mail invitation with a link to the survey.

Web surveys offer a number of advantages over e-mail surveys. Radio buttons and check boxes take advantage of point-and-click technology available on the Web. With a Web survey, respondents can be prevented from selecting more than one answer when only one answer is appropriate. Responses are structured and cannot be modified by the respondent. Automatic skip patterns can be programmed. Sound, graphics, and animation can be included. In addition, data tabulation and collation are aided through specialized software.

Web surveys are either created through the use of a Web Common Gateway Interface (CGI) program or a Web survey system. The Web CGI program involves linking the static HTML (hypertext markup language) survey to a back-end database using the scripting language of CGI. Approximately

80 percent of survey data collected online uses a Web CGI program (Watt, 1999). Web CGI systems demand trained programmers and although skips, screening, and quota management are possible, the difficulty in programming these features further increases the costs. However, if the survey does not require complex logic, the Web CGI survey may be a fast, low-cost option (Watt, 1999).

Web survey systems use software designed especially for online survey construction. A complete system will involve a survey design application, Web server, database, and data extraction program (Watt, 1997). Surveys are designed using a user-friendly survey editor and are then transported to a Web server system. Dynamic HTML/CGI generation eliminates the need for manual programming. The server is used to distribute the survey and collect responses in a database and can be accessed to view graphical displays of the data.

Web survey systems allow the researcher to create more complicated surveys using automatic skip patterns, randomization, and grid-style ratings questions. These systems are designed to be used by non-programmers and will often be less costly than other methods.

Converted computer-assisted telephone interviewing (CATI) systems are translated from the CATI vendor's language for distribution on the Web. The advantages of these systems include good sample and quota management. Converted CATI systems are also able to handle complex skip patterns and data verification (Watt, 1997). Current CATI users can quickly adapt to the online technology and can reuse existing programmed questionnaires. However, CATI systems were designed for use with a telephone interviewer and screen formatting is somewhat limited. The CATI languages do not utilize the ability of the Web to display graphics and visuals. These conversion systems are also expensive to purchase and use.

Downloadable surveys place the survey into an executable file that can be downloaded onto the respondent's computer. Often, the respondent receives a disk containing the survey by mail. The program is run on the respondent's computer and answers are downloaded to disk and returned by mail. Converted downloadable surveys use the technology of the Web to present the questionnaire. In this case, the respondent is required to install the software on his or her own Web site.

Like HTML surveys and converted CATI systems, skip patterns and question rotation can be used and data can be instantly verified. Also, graphics and audio/visual material can be included. The disadvantages include the time and costs involved in programming and distributing the survey. More sophistication on the part of the respondent is required to properly download the survey. In addition, even short surveys may take a long time to download. Concerned about viruses, users may be unwilling to download files. Firewalls may prevent corporate users from downloading these files.

Samples

A sample of online respondents can be drawn in a number of ways and will correspondingly affect the representativeness of the data and generalizability of research findings. The most common recruiting techniques involve the use of customer/client lists, company databases, targeted Web site promotions, on-site intercepts, online newsgroup postings, and traditional communication methods, such as mail or telephone (CASRO, 1998). Panels of volunteer respondents are also available. Banner ads, postings to electronic bulletin boards, and targeted e-mails are also used (Buchwald, 1998). These methods will either produce an unrestricted sample or a restricted/recruited sample.

Several companies have compiled panels of volunteer respondents, which can be accessed for completing surveys. When volunteers register for the service, demographic and lifestyle information is often collected in order to categorize the respondent into a segment. Researchers can use this data to screen for the most appropriate set of respondents. The strength of panels is the control during sampling and efficiency of screening. However, as with any other method, researchers should evaluate the sample to determine how it was developed. Researchers should also question whether the panel members are representative of the general U.S. population, or even the online community.

Researchers can also use unrestricted sampling methods to recruit respondents through the use of pop-up screens, banner ads, or links on Web sites. Bulletin boards and newsgroups are other places to locate respondents. This sampling method tends to produce a sample with poor representation (unless controlled) due to self-selection of the respondents and the characteristics of the online population (Watt, 1997). Researchers using this method often develop a quota strategy to screen the sample and ensure that no subset of the target population is over-represented. Another concern of the unrestricted sampling method is that frequent visitors to the site containing the pop-up screen, banner, or survey link could be over-represented in the sample. The use of cookies, registration data, or prescreening is necessary to secure a more accurate picture of all people exposed to the survey.

Recruited samples are best used for targeted populations, such as the members of an association, company employees, or professionals in a particular industry. Other sources of respondents are product or site registrants. In addition, many list brokers are compiling lists of e-mail addresses for rent. Respondents may be recruited by traditional methods, such as telephone or mail, or by online methods, such as e-mail.

Once located, respondents often receive a survey either by e-mail or are directed to a Web site with the questionnaire. Password protection can be used to restrict access to the survey only to the pre-recruited sample members. The use of a password also assists in identifying who has completed the survey and who requires a reminder notice. This method is most appropriate when a database of potential respondents is available.

Companies who conduct customer satisfaction research may want to begin to collect customer e-mail addresses on product registration cards, through telephone interactions, and on the Web site by using visitor registration or a guest book. Once a list is compiled, the company has a valuable resource for future online research.

The most important rule is to avoid "spamming," a practice whereby a broadcast e-mail is sent without prior consent by the recipients. Companies that use this practice run the risk of being "flamed" (receiving angry e-mails from possibly thousands of people). Another critical step is to get permission from respondents before presenting them with a survey, particularly if the survey is long (Gucwa, 1999). Finally, it is important to use blind distribution lists and never release e-mail addresses of respondents.

When using online surveys, representativeness of the sample may be verified by conducting a parallel study off-line using either mail or telephone questionnaires. The benchmarks established from traditional methods can be used as a way to stratify the online sample.

The online survey method can also be used in conjunction with traditional methods. Those who cannot be reached via the Internet can be contacted by mail or telephone. Respondents can also be recruited through the mail or by telephone and advised on how to access an online survey.

Suggestions

Researchers with experience in online surveying have offered a number of suggestions for effectively implementing and administering an online survey.

CASRO (1998) developed a list of suggestions for creating effective invitations to participate in online surveys. The following components should be included in the invitation:

- A subject line indicating the topic
- How the respondent's e-mail address was located
- The person or group conducting the research
- The purpose of the study
- How the research will be used and who will receive a copy of the results
- The time required to complete the survey
- Contact information

MacElroy (1998) suggested including a description of the incentive to further motivate response.

Buchwald (1998) offered a number of suggestions related to the format of the Web survey. He recommended the use of "cool" colors and breaking the survey into several smaller sections to minimize scrolling. Also, researchers should remember that respondents have different browsers and modems and the use of graphics may frustrate those with slow modems.

Clarkson (1999) recommended that the survey load as quickly as possible and utilize the point-and-click features of the Web for easier response. Radio buttons are recommended for five or fewer options, while drop-down boxes work best if more than five options are provided. Check-boxes should be used for multiple answers.

Because online surveys do not allow the researcher control over the amount of time the respondent takes to complete the survey, researchers have the option of using a CGI script that records when the survey was accessed and when it was submitted (Buchwald, 1998). If timing is critical, surveys with a large time lag can be eliminated.

Gaddis (1998) generated a set of design guidelines based on an analysis of more than 100 online surveys. This analysis yielded the following recommendations:

- The survey's first question should be directly related to the purpose.
- Subjective questions should follow objective ones and least familiar questions should follow most familiar questions.
- Easy questions and demographics should be at the end of the survey.
- As with traditional survey formats, a paper version of the survey should be pretested with the target audience.
- The survey's title should appear at the top of the first page and be contained within the title bar of the survey's homepage.
- Long surveys should be divided into several sections.
- Default answers should be set to "no response."
- Respondents should have a way to clear their answers to individual questions without clearing the entire survey.
- Open-ended questions should be used sparingly.
- The researcher should conclude by thanking the respondent, providing a way for the respondent to

view the results, and offering contact information for the survey's sponsor or designers.

Method Literature

The market research community has witnessed a number of changes in data collection methods throughout the years. Standard methods such as mail surveys, telephone interviewing, mall intercepts, and personal interviewing have been supplemented in recent years with computer-assisted telephone interviewing (CATI), computer-assisted personal interviewing (CAPI), disk-by-mail surveys, and fax surveys (Schuldt & Totten, 1999). All of these methods have been compared, evaluated, and improved through research. As the Internet has grown in use, research on the use of e-mail and Web-based surveys has emerged to place these tools among legitimate research methods.

Research on e-mail surveys has often focused on a comparison between e-mail and traditional mail surveys. Response rates, speed of data collection, and advantages and disadvantages of the e-mail method are often addressed. In addition, the quality of response, survey costs, and e-mail personalization, invitations, and reminders have also been studied.

Mehta and Sivadas (1995) found that e-mail surveys generated the high response rates of mail surveys, but were found to be significantly quicker than mail. Half of the e-mail responses of their study were returned within three days while it took three weeks to garner a comparable proportion of mail surveys. The cost of e-mail surveys was considerably lower and the quality of responses was determined to be better than mail.

A study conducted by the Henley Centre (1996) found that surveys conducted via e-mail experienced a major time advantage over postal methods. The mail survey had a slightly higher response rate (15.4 percent) than the e-mail survey option (13.5 percent). This study also found that the e-mail method experienced higher levels of response completeness (i.e. any answer to a question), but a slightly higher level of item omission (i.e. a question left blank). Finally, the researchers determined that the cost for administering the survey via e-mail was significantly less than by postal mail, as a result of the eliminated printing and mailing costs.

In a study to determine the most effective way to conduct research via e-mail, Schaefer and Dillman (1998) compared several e-mail variations administered to experimental groups to a control group using the mail method. They found that the use of an e-mail pre-notice had a greater impact on response rates than a paper pre-notice. The e-mail version of the survey had more complete returned questionnaires and achieved longer answers to open-ended questions than the mail version. Finally, the time required to receive a completed questionnaire averaged 9.16 days for e-mail surveys and 14.39 days for paper, a statistically significant difference. The researchers advocated the use of mixed-mode strategy to maximize response rates. In using paper (for all communication, as a pre-notice, or a reminder notice), the problem of coverage error was removed.

Researchers at Brigham Young University conducted a study to determine whether the Web could be used to gather data as valid as that collected through traditional methods (Wygant & Lindorf, 1999). They used a split-method survey to test the impact of mail and electronic methods on self-selection and sampling bias. Respondents who returned the electronic survey were more likely to be male and reported using the computer an average of one-and-a-half hours more per week than the mail respondents. Response rates for the electronic survey were higher than the mail survey (50 percent and 32 percent, respectively). In addition, 80 percent of the electronic surveys were returned within 2 days, while it took 22 days to receive 80 percent of the mail surveys. The electronic survey also contained 64 percent more completed questionnaires and 50 percent more words on the open-ended questions. Comparison of the mean responses found nearly identical patterns between the two methods.

Using the Internet to distribute mass, unsolicited e-mail messages (a.k.a. spam e-mail) have been found to be an ineffective method to recruit people for online surveys (as cited in MacElroy, 1998). The researchers found that mail surveys generated a higher response rate than spam e-mail surveys. The use of spam e-mail also multiplied the number of hate-mail responses by 500 percent. In addition, the data quality of the e-mail responses was poorer than that of the mail surveys.

Sheehan and McMillan (1999) found support for the predicted positive relationship between issue salience and response rate and partial support for the predicted relationship between the use of a prenotification and response time.

Research has not only examined e-mail surveys, but has also focused on Web surveys. Findlater and Kottler (1998) conducted a parallel study using the Web and a CATI system. Using a sample of 400 for each method, the results were extremely comparable. According to the researchers, the slight differences were to be expected considering the nature of self-completion versus interviewer-led studies.

Two case studies by King Brown & Partners were detailed in a 1998 article by associates Jeff Rosenblum and Chris Grecco. A survey to measure usage and perceptions of the Discovery Channel Web site was conducted online. Based on the fact that the audience for this site was exclusively Internet-based and would be difficult to locate through traditional channels, this methodology proved effective and appropriate. The researchers were able to complete 600 interviews in one week, download and clean the data in 24 hours, and release preliminary findings within 10 days of launching the study. The researchers reported a savings in not only time, but also cost. Furthermore, respondents could be contacted easily through e-mail for more targeted questioning. A second study for Discovery Stores gave store customers the option of calling an 800 number or visiting a Web site to complete the survey. Online and telephone respondents only differed on demographic characteristics. (Online respondents were more likely to be male, educated, and affluent.) After normalizing and isolating these demographics, responses to key questions were found to be consistent.

Incentives

Offering an incentive to motivate completion of the survey and to compensate the respondent is a common practice in online surveying. These incentives often take the form of a direct payment or small prize, a contribution to a charity, or a sweepstakes. Historically, a drawing for cash or computer/office equipment may be the most effective incentive, while individual rewards are best used for hard-to-reach respondents (MacElroy, 1998). Researchers must remember that drawings must conform to federal and state sweepstakes laws and a complete set of contest rules must be available on the site and should be reviewed by a qualified attorney (Buchwald, 1998).

A study by Swift Interactive Technologies found that reward may not be the ultimate motivating factor in getting respondents to begin and complete a survey (Watt, 1999). Of all the respondents who clicked on a banner advertisement using a sweepstakes as an incentive, 87.9 percent provided a partial set of responses and 62.6 percent completed the entire questionnaire. The study found that the amount of money offered in the sweepstakes did not significantly affect completion rates. Recruitment efforts, ease-of-use of the survey, and interest in the topic may be other factors that influence survey completion.

Purpose

The discussion in trade publications and academic journals of online surveying leads to an interest in how this new methodology is being implemented in the research industry as a tool for communication in survey research. Because the literature has yet to directly address this topic, this study is both exploratory and descriptive. The present study covered the following areas of interest:

- The perceptions of the primary benefits and limitations of online surveys
- The steps taken by research companies to implement online surveys
- The process of determining the use of online surveys as the most appropriate research method
- The future of online surveys
- The current use of online surveys and new business inquiries about online surveys
- The selection of vendors or software for the purposes of survey building, hosting, and data collection
- The type of samples used
- The perception of incentives in motivating response

For the purposes of this study, online surveys includes e-mail surveys, bulletin board surveys, downloadable surveys, converted CATI systems, Web CGI systems, and Web survey programs.

Methodology

Research organizations were located on the Council of American Survey Research Organizations (CASRO) membership list found on the organization's Web Site on June 13, 1999. This site provided a list of 188 research organizations. The CASRO membership roster was selected as the sample frame for this study based on the fact that CASRO is the leading association for research organizations. According to the CASRO Web site, "We are over 170 full-service survey research companies in the United States whose common goal is to promote professional standards and to enhance the quality and growth of survey research."

All efforts were made to locate an e-mail address for each company or a specific contact within the company. The e-mail addresses were found either on the CASRO Web site, the Web site of the company, or by calling the company. Next, an e-mail message was sent to the general e-mail address for the company or to a specific contact within the company. This message contained both a request that the message be forwarded to the appropriate person within the organization and an invitation to participate in the study. Once the correct person was located, a second e-mail message with the survey was sent. Reminders were sent approximately one week later to those who had yet to respond to the survey. Finally, when the survey was returned, an e-mail was sent to thank the respondent. Respondents were offered a copy of the findings as an incentive to complete the survey.

If a company or individuals within that organization did not have e-mail addresses, that company was dropped from the study. It was assumed that the lack of an e-mail address indicated that the company had not ventured into the use of new technology. Under this assumption, these companies would not qualify for this study because only research organizations that were already using online surveys were considered for this study.

A total of 177 e-mail addresses were located, however many of these were corporate addresses and not assigned to a specific individual. Although requests were made to forward the e-mail to the appropriate person within the company, it was assumed that many of these were not forwarded. Of those who responded, 34 did not qualify to participate and 25 completed the survey. To qualify, the respondent was to be the person responsible for online research and the company must have completed at least one online survey project within the past year. It took 61 days to elicit 25 valid responses to the 27-question survey.

Eight respondents worked for a company with fewer than 100 employees, 11 were with companies with 100-400 employees, and 2 worked for companies with more than 400 employees. Three respondents reported divisional employee totals with one working for a division with fewer than 100 employees, one with a division with 100-400 employees, and one with a division of more than 400 employees. Revenues for the companies represented ranged from $2 million to $568 million. Four companies represented have annual company revenues less than $10 million, seven have revenues ranging from $10 million to $50 million, and five have revenues greater than $50 million. Two respondents reported divisional revenues both being in the $10 million to $50 million range. Six of the companies represented have a department specifically for online surveys with the number of employees in those departments ranging from 1 to 40.

Results

The first objective of this study was to determine the perception of the primary benefits and limitations to online surveying. An open-ended format was used for both questions and answers were coded into categories for analysis. A total of ten benefits were mentioned, with speed of data collection and lower cost being cited by the highest percentages of respondents (60 percent and 48 percent, respectively). Convenience to the respondents (20 percent) and access to hard-to-reach groups (12 percent) were also mentioned as benefits. All benefits mentioned are listed in Table 1.

The primary limitation mentioned by 76 percent of respondents was the difficulty in achieving an online sample that is representative of U.S. consumers. Other limitations mentioned included lack of sample control, difficulty in motivating participation, and difficulty in locating a sample (all 8 percent). Table 2 lists all limitations mentioned. The responses to these two questions are in agreement with the literature on this topic, which often cites speed and low cost as the two benefits to online surveying and lack of representation as the primary limitation.

An open-ended question was used to assess the steps research organizations have taken to be able to offer online surveys to their clients. For many companies, taking this step has involved substantial investment in hardware, software, and people.

- *We have invested substantial money in people, software, and hardware for the sole purpose of conducting electronic surveys.*
- *We have invested heavily in software and hardware in order to offer cutting edge capabilities in this area.*
- *We have invested in software and our own NT server.*
- *We have put the necessary infrastructure of hardware, software, and staff skillsets in place, and we have been promoting them in our client base.*
- *We just purchased a new Web server.*

Some companies have been developing their own products or a Web site for administering surveys.

- *[We have] also developed online 'products' and services.*
- *We have set up a worldwide group to create new products...*
- *We have developed two sites from which we conduct online research. These allow us to conduct traditional types of studies with minimal adjustments from the online environment.*
- *[We] have prepared software for dealing with online surveys.*
- *We've evaluated a number of software packages for sale, and have decided to write our own.*
- *We developed our own survey design tool to meld with established procedures and processes.*

Other organizations are validating this method or informing clients about the use of online surveys.

- *[We have] conducted validation work, looking at both the method effects as well as the differences between online and offline respondents.*
- *We have been educating our clients regarding the methodology.*

Some research organizations are recruiting or considering volunteer panels.

- *[We] have begun recruiting for online surveys.*
- *[We have] investigated usage of online panels.*

Other research organizations have formed partnerships with companies that offer online research services.

- *We are currently in a partnership with a company that has developed an online-based research program. We have used it at the request of clients and when we feel it is beneficial.*

Respondents gave a variety of answers when asked when online surveying would be considered the most appropriate method. Because of the sheer diversity of responses, percentages are not reported. Respondents mentioned the following populations as appropriate for online surveying:

- Visitors to a Web site
- Internet users
- Teens
- Affluent and educated people
- Computer users
- Purchasers or users of high-tech products or services
- Any sample with high Internet penetration
- Low-incidence populations

Types of research where online surveying is appropriate mentioned by respondents include:

- New product/concept studies
- Multivariate studies
- Employee satisfaction
- Customer satisfaction
- Business-to-business

Circumstances for selecting online surveying include when:

- A fast turnaround is required
- The budget prohibits the use of other methods
- Visual or audio stimuli are necessary
- A representative sample is available
- An e-mail list or sample is provided by the client
- A large, national sample is required
- There exists a sample and a means to recruit respondents

According to respondents, the survey must conform to the following characteristics to be appropriate for online research:

- Salient topic
- Able to be self-administered
- No probing of open-ended questions required

Most respondents reported an optimistic outlook for the future of online surveying. Again, a sample of the open-ended responses to this question are provided. Many respondents believe that online surveying will become the primary, but not the only, method used in market research.

- *I think they will become a very significant part of market research, though I don't think they will ever become the sole method as some people believe.*
- *It will probably account for 35-50 percent of our business in five years.*
- *It will significantly increase and will take the place of many traditional telephone or central location tests.*
- *They will become more and more common until they are standard.*

Some respondents commented that sampling issues will be diminished over time.

- *Sampling issues will eventually "go away," maybe not necessarily be solved, but be accepted as the problems with phone research were early in the game.*

- *Increasing (use of online surveying) as more people/businesses gain e-mail/Internet access and e-mail addresses become more stable.*
- *Internet access will expand to a larger, more representative population allowing for more accurate projections, less weighting.*

Respondents were asked to indicate what percentage of their projects, clients, and new business inquiries in the past 12 months involved an online surveying method. Although respondents reported that an average of approximately 40 percent of new business inquiries include online surveying, a lower percentage of projects and clients served in the past 12 months actually involved an online survey project. The mean percentage for projects and clients was 17.9 percent and 15.0 percent, respectively. Table 3 illustrates the results.

Respondents were also asked to indicate which online survey methods have been used for projects within the past 12 months. Web survey systems have been used for an average of 61 percent of projects, while e-mail surveys have been used for an average of 16 percent of projects. Convertible CATI systems were used for 15 percent of projects, while downloadable surveys have been used for 5 percent. Figure 1 illustrates the entirety of the findings on this question.

A series of questions probed how respondents handled the programming/survey building and the survey hosting/data collection steps in online surveying. These questions reveal whether these functions are handled in-house or by an outside vendor, the reason for selecting this vendor or system, and the resulting benefits and limitations of the chosen vendor or system.

Fourteen respondents handle the programming and survey building functions in-house using a Web survey program. Approximately 29 percent who use this option chose it for the control it provides and the lower cost. Other reasons include the limited options available (21 percent), the need to build expertise in this area (21 percent), and the ability to react or reach audiences quickly (14 percent). Other answers included the flexibility and the convenience of this option.

Respondents offered a number of benefits and limitations of handling the survey programming and building function using a Web survey system. Two respondents mentioned that their Web survey program is compatible with their CATI system. Other answers included the programming flexibility, ease of use, ease of programming, and the overall capability to handle skip patterns, randomization, rotation, real time editing, and logic checks. Limitations of these systems include the ability to handle certain advanced logic features, complex conjoint and discrete choice studies, and complicated rotations. Other limitations are finding the time to continue development, having to learn the system while using it, and working out the bugs.

Eight respondents use an outside vendor for this function. Most respondents mentioned the expertise of the outside vendor in this area (25 percent) or the access to an established panel (25 percent) as reasons for outsourcing this function. Other reasons included the ease of deployment and the efficiency of this option.

The benefits of outsourcing this function reflect the reasons for using it. Respondents cited the access to panels offered by these vendors, technological expertise, good client services, quick results, ability to handle high volumes, online reporting, ease of use, and formatting flexibility. Limitations include the inability to host surveys on their own Web site, loss of complete control over the survey instrument, and the time required to complete a project. Other limitations include graphical representation of the data and some screen layouts.

Other options for handling this function include the use of a CATI system. Two respondents use this option for the lower cost, the control it offers, and the convenience. Only one respondent handles the programming and survey building function in-house using a Web CGI system. According to this respondent, this method offers the most flexibility.

Respondents were also asked whether they handled the functions of survey hosting and data collection in-house or whether they were outsourced. Sixteen respondents handle these functions in-house. The most-cited reason (69 percent) was to maintain control over this process. Other reasons included lower cost (25 percent), confidentiality or security concerns (19 percent), and opportunity to develop expertise in this area (13 percent). Respondents also cited the availability of bandwidth, ability to be responsive to client needs, and convenience as other reasons. Bandwidth availability was the only limitation mentioned by respondents.

Nine respondents use an outside vendor for survey hosting and data collection. Reasons included the cost, the reliability and security, the lack of expertise and hardware, and the small volume of online projects. Benefits of outsourcing this function include the ability to offer quick results and data storage reliability. Access to real-time data reporting was mentioned as a limitation.

As discussed earlier, online samples are drawn in a number of different ways, with each method offering its own advantages and drawbacks. In this study, respondents were asked to indicate what percentage of online survey projects conducted during the past 12 months involved respondents either from the general online public, an online panel, or a specific contact list. Respondents have used a contact list for an average of 52 percent of projects. Other popular methods include the use of an online panel (averaging 25 percent of projects) and the general online public (11 percent). Figure 2 illustrates the average percentages for each of the methods used.

Incentives are becoming a standard in online research. This study elicited information on the type of incentive research executives consider to be the most effective for online surveys. Most respondents cited that they believe individual incentives are the most effective (51 percent). Also mentioned were the use of drawings (27 percent), donations (4 percent), and no incentive (14 percent). Figure 3 summarizes the responses to this question.

Conclusion

The purpose of this study was to understand how research organizations perceive online surveying and how they are using the new technology of the Internet to conduct research. The primary benefits and limitations of this methodology cited by respondents are consistent with the literature. However, it is unclear whether these opinions were derived from direct experience or through reading these same trade publications. Again, when asked what circumstances make online surveying an appropriate choice for a research project, respondents mentioned many of the same populations discussed in trade publications.

According to respondents, Web survey systems are being used for most projects. In addition, most respondents are managing the functions of survey building and hosting in-house. Contact lists have been used for the highest percentage of projects and individual incentives are perceived as being the most effective.

Although a representative sample of research organizations using online methods for survey research should exist online and such a study is not subject to the limitations facing many online surveys (lack of a representative sample), the ability to generalize from these results was hampered by the small sample size. However, as an exploratory study, the results should serve to guide future studies in this area.

Two oversights in design may have contributed to the low response rates. First, the survey was sent via e-mail through mass mailings. No attempt was made to conceal the mailing list using blind e-mail distribution. Second, the survey was possibly too long and cumbersome to be answered easily through e-mail. The use of many open-ended questions may have discouraged some potential respondents from responding. In addition, the lack of a list of direct e-mail addresses hampered the ability to locate the appropriate individual within each company. When e-mails were sent to the company's general e-mail address, it is likely that some were not forwarded to the appropriate individual. Also, respondents may have been hesitant to divulge information at a time when many firms are attempting to develop a competitive advantage in this area.

As the leaders in this emerging technology for survey research, these organizations provide insight into how online surveying is being added to the set of research tools. This study can provide practical knowledge and understanding acquired through direct experience to other research organizations as they attempt to navigate this new methodology. This study also has implications for companies that provide services for research organizations--whether they are software designers or subcontractors for this business.

Tables and Figures

Table 1:

Primary Benefit of Online Surveying

Benefit	%	n
Speed of data collection	60%	15
Lower cost	48%	12
Convenience to respondents/cooperation from respondents	20%	5
Access to hard-to-reach groups	12%	3
Elimination of interviewer bias	4%	1
Improved quality	4%	1
Ease of implementation	4%	1
Use of skip patterns	4%	1
Respondents more interested	4%	1
Use of images	4%	1

**Due to multiple responses, the total exceeds 100%.*

Table 2:

Primary Limitation of Online Surveys

Primary Limitation	%	n
Lack of a nationally representative sample	76%	19
Lack of sample control (ability to control who is taking the survey)	8%	2
Difficulty in motivating people to participate	8%	2
Difficulty in locating a sample	8%	2
Questionable validity of responses	4%	1
Low response rates	4%	1
Inability to use unaided questions	4%	1

**Due to multiple responses, the total exceeds 100%.*

Table 3:

Percent of projects, clients or new business inquiries that involved an online surveying method

	Projects **n=21**	**Clients** **n=22**	**New Business Inquiries** **n=23**
Mean	17.9%	15.0%	40.2%
Median	5.0%	5.0%	35.0%
Mode	5.0%	5.0%	5.0%
Standard Deviation	25.5%	25.0%	36.2%

Figure 1:

Use of Online Surveying Methods

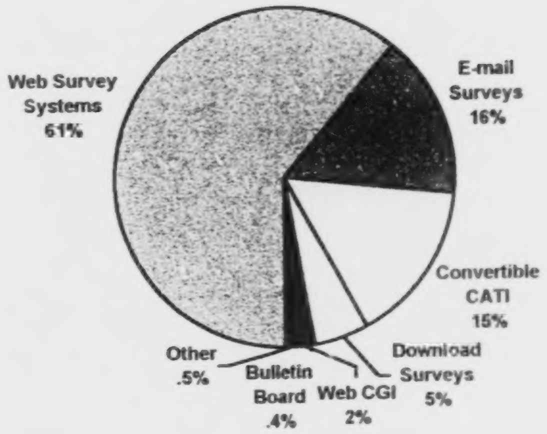


Figure 2:

Online Samples

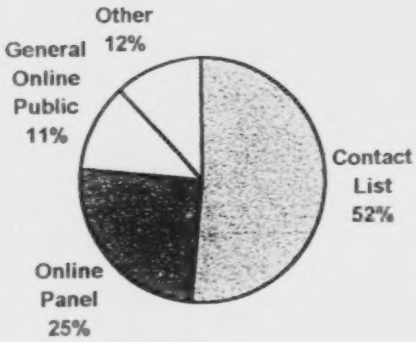
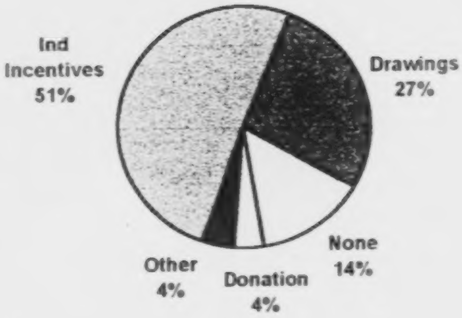


Figure 3:

Perceived Incentive Effectiveness



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BROADCAST POLICY RESEARCH OF JAPAN: A HISTORICAL OVERVIEW

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BROADCAST POLICY RESEARCH OF JAPAN:
A HISTORICAL OVERVIEW

Introduction

The expansion of the global media market has led to an unprecedented growth of feedback from news consumers toward media vendors, such as newspapers, television programs, and magazines. Also, the recent digitization of the industry offers media entrepreneurs a good chance to actively participate domestically and globally in the media marketplace. Every country has unique social, economic, political background which shape its media system. For example, media concentration laws, investment from outside countries, and market penetration restrictions among terrestrial, cable, and direct broadcast satellite players are affected by policy-making and the policy-making process.

In the field of broadcasting, terrestrial broadcasting is commonly important in any country in the world because this type of service has a tendency to universally reach home television households in a cost-effective way. The digitization of terrestrial television broadcasting which began in late 1996 in Great Britain and the United States, is in transition. Currently, Japan is try to catch up with these two countries and officially announced that digital broadcasting will begin in 2003. Originally, Japan planned to launch its digital service before the year 2000, but due to technological difficulties and the clash between government, bureaucrats, and broadcasters, broadcast digitization became a highly politicized issue, so that the pace of the digital transition was forced to slow down. These circumstances caused the absence of theoretically-based analysis in regards to political phenomena.

In order to better understand policy-making processes of Japan's broadcasting, a more theoretically based approach is desirable. This paper focuses on trends of Japan's broadcast policy research which have not been theoretically well-developed and systematically organized in the policy-making process. Also, the significance of this paper is to grasp a whole picture of Japan's broadcast policy-making from a historical point of view in order to appropriately understand its current status. Japan's broadcasting research involves a unique origin and development. This paper is comprised of four parts: first, an overview of the nature of broadcasting research in Japan; second, a chronological review of Japan's broadcast policy research, including studies conducted by international and domestic scholars; third, the theories on policy-making, including some theoretical tools in analyzing the general policy-making tendencies of Japan, which has been supported mainly by state-centric and society-centric approaches. In conclusion, the researcher focuses on theory considerations in Japanese broadcast policy analysis and proposes further studies.

Nature of Broadcasting Research in Japan

Before reviewing the related literature, it is worthwhile to examine the nature of broadcasting research in Japan, when it started and how it evolved.

Japan's First Broadcasting Research Institute [1947 ~ present]

Broadcasting studies began with the establishment of the Broadcasting Culture Research Institute at Nippon Hoso Kyokai (NHK) in June 1946 (*Showa 21nen* - Japanese calendar year) only ten months after the end of World War II.[1] NHK was obliged, according to Chapter 1 Section 1 of the Broadcast Law, to facilitate research which would contribute to the improvement and development of broadcasting of Japan and, according to Chapter 44 Section 2 of the Broadcast Law, to discover the wants and needs of the public. Thus, NHK was expected to periodically conduct scientifically executed public opinion polls and make the results publicly available.[2]

In the early 1950s, the Institute gathered data for the effective development of programs, such as diffusion studies of radio and television[3], use analysis of educational programs and educational production soft-ware, and needs of schools for programming.[4] The Institute played a central role in diffusing a common language all over Japan. The broadcast language utilized by NHK's announcers was considered the typical Japanese language which all Japanese people should learn. In this sense, NHK served as the living text for a model language acquisition of Japanese.[5]

The Advent of TV Broadcasting [1953 ~ present]

In February 1953, NHK started its television broadcasts followed by commercial television broadcasting by Nippon Television Network Corporation (NTV) in August 1953. Research on television broadcasting began in 1959, the year an Office of Studies of Broadcasting was established inside the NHK Broadcasting Culture Research Institute.[6]

Also, in 1959, because of the live television coverage of Prince Akihito's wedding ceremony, Japanese households rushed to purchase television sets. The total number of black and white television sets tuned to NHK in 1958 was only one million, but in the year following the Prince's wedding, the number dramatically increased to five million households paying viewer fees to NHK.[7]

The increased number of home television viewers stimulated the NHK to examine in greater depth its audience response and the social impact on Japanese society of aired television programs.

The NHK Broadcasting Culture Research Institute pursued three basic research themes:[8]

1. to study the sociological significance and meaning of broadcasting and the ideal philosophy for television programs;
2. to study the social impact of television on the younger generation from the aspect of negative influence; and
3. to respond to the need to integrate and systematize broadcasting within Japanese society.

The problem in conducting research on these themes was the scarcity of academic researchers capable of carrying out broadcasting studies. To conquer this problem, the Institute in the early 1960s established a research committee. This committee invited outside scholars to be involved in and contribute to specialized broadcasting research projects. Research committee members came from the fields of sociology, social psychology, psychology, philosophy, aesthetics and political science.[9]

NHK's practical research, such as audience reception data and programming research, was shared with theoretical researchers in universities. By the tenth anniversary of NHK Broadcasting Culture Research Institute, the Institute was publishing three scholarly journals and the research results were getting the attention of communication scholars inside and outside Japan.[10]

By 1962, the Institute was welcoming distinguished communication researchers around the world to make use of its research data. Some of them, such as Wilbur Schramm, were scholars from the U.S. communication schools.[11] This was a very early academic open door toward international research. Some of these scholars, such as Wilbur Schramm, were distinguished communication scholars who led schools of thought on communication in the United States and elsewhere.

NABJ Research Institute

In 1952, the National Association of Broadcasters of Japan (NABJ) established its own Research Institute. The primary emphasis of the NABJ institute at that time was to study influence of television broadcasts on children. The NABJ wanted to collect data using a scientific approach which would be effective in defending itself against unwanted government regulation. During that time, the Japanese government was concerned about the educational impact of broadcasting in licensing new television stations.[12] It can be imagined that NABJ's commercially based research was less than pure academic research.

Transition to Color TV

In 1960, when color television broadcasting started, NHK had 5 million license fee paying households. Japan was enjoying an economic boom. In 1965, the year of the 20th anniversary of the Institute, two main divisions were established. They were the Synthesized Broadcasting Culture Research Institute, which emphasized research from the program sender's perspective and the Public Opinion Poll Office of Broadcasting which focused more on a program receiver's perspective. Also in 1960, the Office of Studies of Broadcasting created four main theme divisions: (1) theory, (2) history, (3) system and (4) culture.[13] In the 1960s the Institute produced books which included its accumulated research results and started gathering information on the broadcasting systems of foreign countries as a basis for revising Japan's regulatory framework for broadcasting.[14]

In 1971, the NHK general channel accomplished full color television signal transmission and had 10 million color television contract holders. During the 1970s, the main theme of broadcasting research was to study the future broadcasting society and the public needs for information. Thus, the research trend shifted more to a longer term approach. In 1973, the NHK Public Opinion Poll Department started its lifestyle survey, which has been conducted every five years since then. There was also an increasing interest in politics. Since 1976, annual political surveys have been conducted.[15]

The Institute produced many reports about foreign broadcast production and programming strategies based on comparative studies. In the early 1980s, before the *Nyu Media* [New Media] age, the Institute spent three years focusing on the role of local broadcasting. From 1978 to 1988 both broadcast stations and communications scholars were critically examining Japan's system of public broadcasting by reviewing NHK operations and its problems.[16]

Multimedia Era [1984 ~ present]

This period has been called the multichannel era and the era of multimedia, in Japanese *Ta Media to Ta Channeru Jidai*. Japan's first broadcasting satellite was launched by the National Space Development Agency of Japan (NASDA) in 1984, the same year NHK started experimental DBS television service. This period includes the start of HDTV experimental broadcasting, the advent of metropolitan cable television service, and the inauguration of commercial DBS and communication satellite television service. In response to these events, the research institute was integrated into one entity and renamed the NHK Broadcasting Culture Research Institute which is exactly the same name of the first research institute.[17]

Early in the 1990s, comparative studies between Japan and the United States became core research themes, and a cooperative symposium was held under the title of "What Has World Television Reported? [*Sonotoki Sekai ha Nani wo Tsutaetaka*]"[18] Within the rapidly changing world-wide broadcasting framework, the Institute also aggressively collected up-dated information on broadcasting regulation in advanced countries.

As media economist Robert G. Picard has pointed out, the main concern of commercial broadcasters was always with how audiences and advertisers choose and use media. For them, the research priority has been understanding the activities of consumers in the marketplace, that is, understanding how and when audiences consume media products and services.[19] The function of the NHK Research Institute has been of a slightly different orientation, since NHK has its obligation to the Broadcast Law of Japan. Whether it liked it or not, NHK has been given the mandate of conducting and maintaining a high academic level of research on a much broader range of issues.

Broadcast Policy Research in Japan

International Arena

Comparative Broadcasting Policy

Western researchers' interest in Japanese broadcasting started in the context of comparative broadcasting systems. In 1956, Siebert, Peterson, and Schramm proposed the Siebert-Peterson-Schramm Typology.[20] Burton Paulu in 1967 criticized this approach, noting that it was of little use in analyzing the European media systems.[21] Paulu favored the Namurois model developed in 1964, which proposed four different modes of control.[22] These are: (1) State-operated, used by most communist countries and emphasizing government ministry, department or administrative agency operation, (2) Public corporation, used by Britain (BBC), France, West Germany, Belgium and the Netherlands, operating autonomously under state charter, (3) Public interest partnership, used by Italy, Sweden and Switzerland, functioning by legally private corporations with state stock interests, and (4) Private enterprise, used by the United States, Japan's private stations and Luxembourg, referring to the operation of private corporations with weak government regulation.[23]

Bernard Krisher, a *Newsweek* correspondent in Tokyo, Japan from 1962 to 1974, was an early observer of contemporary Japan's broadcasting system from a professional journalist's point of view.[24] In his writings, he described the NHK operational system and programming, and the broadcasting culture of Japan. He emphasized the healthy independent status of NHK in the 1960s and into the 1970s. However, Krisher's writings were descriptive in nature and not based on systematic research.

Mass communication was a major topic of interest in American academia and received great attention from students of journalism, mass communications, sociology, political science, and psychology. During that time, mass media distribution in the United States was dominated by the three major networks, but international comparative studies were emphasized.

Sydney W. Head headed a team of advisers for the Sudan Broadcasting System in 1960. He realized he could never advise imitating American programming and production methods. His answers were incorporated into his 1985 textbook *World Broadcasting Systems*. Head was an editor of comparative regional surveys of broadcasting, which led to his own volume solely on Africa in 1974. He contributed to the volume on Asia by John Lent in 1978 and on the Arab World by Douglas Boyd in 1982.[25] By going through these different regional broadcasting systems as an editor, Head was able to establish his own attributes of broadcasting systems.

In 1986, comparative broadcasting systems scholar W. J. Howell Jr. published *World Broadcasting in the Age of the Satellite*. Howell pursued a highly complicated methodology for world broadcasting analysis. Japan was placed in the same categories as countries of Western Europe. Howell emphasized the era of new technology and new media with cable and satellite distribution capabilities.[26] Information flow was a serious issue for international scholars during this period. Hamid Mowlana, in describing international flow of information, targeted Japan as one of the undercovered countries by the U.S. media.[27]

In 1987, William H. Dutton, Jay G. Blumler and Kenneth L. Kraemer reported on wired city projects in the United States, Japan, France, West Germany and Great Britain in their book, *Wired Cities*.[28] From the 1980s to the early 1990s, there was a movement among city planners which emphasized cable infrastructures to realize a future information society with highly advanced interactive capabilities. *Wired Cities* introduced the effort to study the driving forces and social implications of new communications technologies based on the hypothesis that variations in the technological and public-policy approaches of different nations to the wired city would be influenced by their histories and cultures.[29] *Wired Cities* uniquely emphasized the importance of a political perspective and insisted that more attention should be given to the politics of developing new communications technologies and policy. The *Wired Cities* authors pointed out the necessity of studying the actors and the motivations behind the development of such policies.[30]

In 1988, Ralph Negrine in *Satellite Broadcasting: The Politics and Implications of the New Media*, examined the implications of technological change and government regulation.[31] He picked Japan as one of the cases. However, a limitation was that there was no Japanologist who could help him digest the Japanese political situation. The result was writing which did not go into much detail about the political arena of satellite broadcasting.

In 1989, a close academic colleague of Sydney Head, Donald Browne of the University of Minnesota, published a condensed analysis of world broadcasting systems focusing on six industrialized nations. In *Comparing Broadcast Systems*, Brown characterized the Japanese system as a nonwestern approach with a western structure.[32] Browne addressed several basic factors in looking at world broadcasting systems, such as geography, culture, economy, politics, and demography which covers general broadcasting operations and systems pertaining to how they work. One of Browne's significant contributions was on the impact of politics on broadcasting systems:

> The political factor seems the most crucial. So many major changes in broadcast systems have come about because of changes in political power, for instance, privatization in France and in West Germany, while lack of change in political power seems to have been accompanied by lack of notable change in broadcasting, as in Gaullist France, in Japan under the Liberal Democrats from 1950 to the present, and in East Germany and the Soviet Union before Gorbachev. The economic factor often runs in tandem with the political factor, as the more conservative parties look upon broadcast technology (fiber-optic cable, satellites) and on the licensing of commercial stations as "engines" to drive the economy.[33] (underline added by the researcher)

Browne touched upon Japan's political and legal system of broadcast regulation. However, within the context of a comparative framework, Browne could not go in-depth regarding the broadcasting policy-making process.

In 1990, Peter Dunnett conducted an economic analysis in the framework of comparative broadcasting systems, whose approach gave more serious consideration to politics:

> Government policies in all countries have a widespread effect on the structure, conduct, and performance of the media. Government policies are amongst the basic conditions of the industry, and apparently small changes in government policies can have significant, widespread effects on the media in general.[34]

Dunnett utilized the industrial organization model which make it possible to examine the effects of government policy. However, this analysis was also weak and failed to grasp Japan's policy process.

Early in 1998, Michel Dupagne and Peter B. Seel published a book on *HDTV* which analyzed high-definition television (HDTV) from a global perspective.[35] This work, which focused on the United States, Europe and Japan, points to topics for further study.

The Japanese case was presented as a historical description. To make their study more clear and accurate, in-depth interviews would have been highly effective. To study these global matters in-depth, however, requires international scholary cooperation.

In sum, comparative broadcasting systems approaches cannot cover the political processes of country-by-country cases in depth; however, depending on the approach, such studies can give us insight into political decision-making.

Country-By-Country Approaches

Some international media scholars have analyzed broadcast journalism in Japan, but few have approached political decision-making. Researchers will rarely find a Japan-only study even on general media topics. Jung Bock Lee tried to figure out how the Japanese press system works as a force of political pressure.[36] Lee analyzed the origins, the structure, and the attitudinal inclinations of the Japanese press. Although his research is not about broadcasting policy-analysis, it is about the relationship between media and politics.

In 1993, Ofer Feldman concentrated on newspapers to figure out *Nagatacho*, place name of the political melting pot which is in Tokyo, and *Kasumigaseki*, place name which has become a symbol of bureaucracy in Tokyo, by observing the interactions between elite politicians and press correspondents.[37] Although Feldman's work interests readers, the critical problem of his work from an academic point of view is that he failed to lay the theoretical groundwork of mass communication and political communication.

In 1996, Susan J. Pharr and Ellis S. Krauss published *Media and Politics in Japan*.[38] Both authors came from the political science field; neither were communication or journalism specialists. Therefore it is natural that communication concepts by key communication authors were lacking in the work. Furthermore the title tells readers that this book is about Japanese media, but in reality it is a comparative study between the United States and Japan.

In 1997, a comprehensive mass communication study was published by Anne Cooper-Chen, whose title is *Mass Communication in Japan.*[39] This is an introduction to Japanese mass communication written in English from a scholarly point of view. Even though it includes broadcast technology and policy and regulation of broadcasting, the analysis does not go further than general guidance in these areas.

In sum, Japan-only studies tend to be general guidance or insightful reports without theoretical underpinning using communication theories. As a result of the comparative broadcasting and country-by-country approaches, study of policy and politics relating to Japanese broadcasting has increased, but not dramatically.

Domestic Arena

The weakest link in the field of broadcast research in Japan is in the area of broadcasting policy. Among the many research reports by NHK Broadcasting Culture Research Institute, only thirteen articles on policy can be sorted out from the literature. Yujiro Chiba published the first policy related article reporting on a 1962 lecture whose title is *What Makes for Good Broadcasting?*[40] This was a subjective piece with no theoretical support, revealing only what the author thought about the form Japan's future broadcasting structure should take.

The next article addressing broadcasting policy was published eighteen years later in 1980. This is also a report of the thoughts of representative scholars mainly from NHK Broadcasting Culture Research Institute. Yoshimi Uchikawa, Etsuo Ishizaka, Junichi Hamada, Kenshiro Otani, Akira Ishikawa and Kazuhiko Goto discussed the ideal broadcasting system for Japan and its policy implications.[41] They revealed only their opinion based on their accumulated knowledge. A year later three participants of the 1980 discussion plus one new member, Etsuo Ishizaka, Jyunichi Hamada, Akira Ishikawa and Shin Takashina summarized their own thoughts and published a similar article in 1981.[42] All the researchers are highly respected in Japan because of their contribution to the study of broadcasting; however, from the Western scholar's point of view, which emphasizes a theoretical rationale in conducting research, their arguments fell short of meeting the criteria for scientific research.

In 1986, Nobuhiro Minoha did a piece of research about commercial broadcasting from the political point of view examining how the Ministry of Posts and Telecommunications (MPT) influenced multi-station license policy in the local commercial broadcasting market area.[43] This study was an ice-breaking attempt by NHK Broadcasting Culture Research Institute because it had a tendency to research more general public and broadcasting trends while neglecting commercial movements. The zeitgeist of the middle 1980s was that commercial broadcasters all of a sudden started attacking NHK because of NHK's cooperation with the government to introduce satellite broadcasting. Eventually, NHK was forced to analyze the whole broadcasting environment of Japan, including commercial broadcasting. Therefore, it is not surprising that NHK Broadcasting Culture Research Institute took a look at MPT policies on channel allocations.

In the same year of 1986, Toru Hanawa of NHK Broadcasting Culture Research Institute published a paper on the restructuring of NHK.[44] This article examined NHK's role as a public broadcasting station and questioned whether NHK should become more of a commercial entity. Currently, NHK is in good financial health, but during the 1980s NHK was in hot water due to consecutive years of red ink, and the Japanese Diet was reluctant to increase viewer fees to cover increased operational costs.

Five of NHK Broadcasting Culture Research Institute articles are, therefore, broadcasting system and policy related and the remaining eight articles are about the building of a new broadcasting framework following World War II, which means that the majority of the policy research articles are about historical policy analysis. None of the articles related to policy making have a firm theoretical argument.

Ikuo Takeuchi, an early researcher with NHK Broadcasting Culture Research Institute, pointed out that the Institute had a practice of giving broadcasters feedback data to help them produce better programs rather than pursuing genuinely objective research.[45] In other words, NHK Broadcasting Culture Research Institute's research purpose was mainly a practical one to improve program quality.

In sum, it is clear that Japan's broadcasting policy research has been shallow. There is neither much of a theoretical underpinning or empirical research in broadcasting policy-making. This is the setting within which the current research is being conducted. The researcher concludes that looking at the role of government and the policy process in studying Japan's broadcast policy-making is right on track since so little research has been done.

Theory on Policy-making

There are some theoretical lenses that can be used to focus on and analyze such policy-making as is occurring in Japan. Each theory gives a somewhat different way of viewing and analyzing the process. Unfortunately for researchers, theories and models which were developed in Western countries cannot be applied to the Japanese situation precisely.[46] As Bradley Richardson has pointed out, Japan's policy-making system has its own unique characteristics and is in many ways a special case.[47]

A rich analysis of Japanese broadcast policy-making can only be conducted when the different theoretical perspectives and their boundaries are viewed from a multicultural perspective. W. Barnett Pearce and Uma Narula point out the general agreement that direct borrowing of Western research models and applying these to non-Western societies would be a mistake because it invites logistic difficulties in understanding the socioeconomic structures of non-Western countries.[48]

> An important strand in this emerging consensus is an attention to the specific details of particular instances of social action, an appreciation of the importance of the unique features rather than the universal characteristics of that which is studied. This emphasis on human activity, both by the researcher and those studied, reframes the understanding of the status of "practical problems" in research.[49]

Kent E. Calder, in the study of international relations from Western language publications of a comparative point of view, has pointed out that many of the scholarly works often have ignored Japanese interpretations of Japan's own policy processes, institutions and objectives.[50]

In considering the politics of broadcast regulation, certainly there is a difference between the U.S. and Japanese societies, so that theories commonly used in analyzing broadcast regulation which have been developed by Western scholars will never exactly match with the Japanese situation. For example, Krasnow, Longley and Terry's model about FCC policy-making gives good hints for analyzing broadcast policy-making in Japan.[51] However, the functions of the courts and independent authorities apart from government agencies like the FCC do not operate in Japanese politics, so that adopting the Krasnow, Longley and Terry model would be inappropriate in explaining Japanese broadcast policy-making.

In the study of the Japanese political process and its case studies by either Western or Japanese schools of thought, which commonly share the same political perspective because the Japanese have learned political theory from Western countries, a number of approaches have been developed to investigate the Japanese public policy-making process. The primary question is how well various theoretical approaches and models of Japanese politics fit the political reality of Japan. Even though the boundaries of theories often overlap, each approach provides a slightly different lens for looking at the Japanese political process.

State-Centric Approach

Japanese journalism always mentions the role of the elites, but recent press coverage of the restructuring of Japanese media suggests that the established bureaucracy is being bypassed. In the 1960s, Robert A. Scalapino and Junnosuke Masumi argued that "conservative dominance in Japan is the product of a triple alliance between bureaucracy, key national interest groups, and the Liberal Democratic Party."[52]

Similarly, Nathaniel Thayer concluded that the businessmen had influence over the politicians, the politicians control the bureaucracy, and the bureaucrats keep the businessmen in line, which is a natural system of checks and balances.[53] It seems clear that the dominant model for examining Japanese political processes has been the state-centric approach.[54]

The Elitist Model

According to a 1977 review of the literature by Haruhiro Fukui, the most accepted approach for policy-making in contemporary Japan has been the state-centered elitist model, based on the concept of "a tripartite power elite composed of leaders of the ruling Liberal Democratic Party (LDP), senior bureaucrats, and big businessmen."[55] Fukui emphasized that the three major groups comprised a regular and effective alliance and controlled the decision-making on major policy issue. The elitist model has had strong and broad scholarly support. However, this tripartite power elite structure has never been clearly explained, and there is even less agreement on which group is more powerful. If this way of looking at broadcast policy-making in Japan is adopted, the problem will likely be the difficulty in accurately assessing the patterns of power and degree of strength to which each elite group is involved.

Bureaucracy Dominant Model

The weaknesses of the elitist model broadened the scope of the argument and contributed to developing another theoretical perspective. The bureaucracy dominant model emphasizes the superior influence and power of the government bureaucracy in policy-making within the tripartite power groups. The Japanese bureaucracy has often been thought to be the pinnacle group generating rational policy-making.

The mystique about Japan's bureaucracy emanated from the story that Japan's economic growth after World War II was dependent on the industrial policies set by the Japanese bureaucracy. This orthodox view perceived a consistent approach before and after World War II.[56] In 1974, T. J. Pempel examined bureaucratic control of the policy-making process in post-war Japan based on four indicators: (1) declining role of the Diet as an independent legislative organ; (2) links between the ruling Liberal Democratic Party and the bureaucracy; (3) the bureaucracy's use of the ordinance power; and (4) the significant control exercised over allegedly independent advisory committees. In all four categories, the strong and growing role of Japan's bureaucracy was confirmed.[57]

Chalmers Johnson, a leading scholar of the bureaucracy dominant model, has emphasized the role of strong state bureaucracies in "rational policy-making" leading to industrial success.[58] Johnson's main theme is how the government intervenes in political decision-making for what purpose. Johnson has pointed out that the elite bureaucracy of Japan has made most of the major decisions, such as drafting legislation, controlling the national budget, and sorting out all major policy innovations in the system.[59] This is a rational system, Johnson explained, which could tolerate inefficiency in order to achieve more effective policy leading to greater economic growth.[60]

Regarding Japanese decision-making, it is centered on two different bodies in the system, that is, a bureaucracy and a Diet. According to Johnson, even though the Japanese political system is influenced by interest groups and a political atmosphere, the Japanese bureaucracy has unified the influential power for all policy-making processes. In general, his assertion is that Japan's miracle was achieved by the rational policy choices of bureaucrats.

One of the criticisms of Johnson's bureaucracy dominant model is that it is an effective tool in analyzing events covering a certain period of time, but that it is quite difficult to use it as a general application model for Japanese policy-making. There is insufficient consideration of the sometimes-negative side effects of policy-making while concentrating only on successful cases of rational policy-making. It does not take into account the strong influences outside the realm of bureaucracy, which force changes - even reversals - of policy.[61]

Society-Centric Approach

The society-centric approach challenges the top-to-bottom vector, emphasizing that societal factors can be an influential force in policy-making. In this sense, the bureaucracy-dominant model and elitist model are top-down explanations, while the society-centric model looks in the other direction, from the bottom up. Muramatsu and Krauss[62], Yasunori Sone[63], Seozabirp Sato and Tetsuhisa Matsuzaki[64], Takashi Inoguchi [65], Ikuo Kabashima and Jeffrey Broadbent[66] and Gary D. Allinson[67] have all critiqued the state-centric approach.[68]

Muramatsu and Krauss in their counter arguments have emphasized two political factors, which are the role of the elite and the Japanese national consensus. First of all, they argued that Johnson neglects the role of political variables, competition and conflict, such as political party strategy, political leadership, relations among politicians, bureaucrats, and interest groups. Thus, politics cannot completely insulate the bureaucracy from outside influence, and politics plays a role in shaping decisions. Secondly, focusing only on national consensus on developmental goals in postwar Japan ignores the many changes of development among Diet members in response to domestic and international pressures. Finally, Japanese policy-making has shifted under the pressures from the more influential politicians, parties, and the Diet to the stronger and more autonomous interest groups. The established framework now exercises less and less influence.[69]

Patterned Pluralism

In 1987, Muramatsu and Krauss looked chronologically at the changing society and noted that political parties had become increasingly involved in the policy-making process, strengthened by close relations with interest groups. They claim that there is now a changed relationship between politicians and bureaucrats. This is obvious from the observations that (1) fewer bureaucrats become politicians, (2) politicians increasingly are policy experts called *zoku giin* and (3) politicians have developed strong links with interest groups which enable them to better influence the bureaucrats. Thus, they introduce a different way of looking at the bureaucracy dominant model in which Diet members have roughly equal influence with the bureaucrats in political policy.[70]

Muramatsu and Krauss coined the term "Patterned Pluralism" referring to the institutionalized relationships among sectors of the bureaucracy, the dominant party (LDP), and social interest groups sharing a common interest which lead to competition and conflict. Patterned Pluralism has its limitations as a model in that there is an assumption that interest groups can affect the political process yet acknowledges that bureaucracy is still an important factor. The difficulty in using this model is in knowing the exact degree of autonomy and influence in the relationship.

One of the clear advantages of the Patterned Pluralism approach is that once political leadership is provided, the types of policies developed to handle the problem are consonant. On the other hand, a disadvantage is the problem of prioritizing goals in deciding which groups shall gain more (or less) influence and power. This is particularly troublesome because patterned pluralism emerged based on the assumption that stable political party power would be able to cover the needs of national constituencies.

Other Ways of Thinking

There are other ways of articulating unique patterns of policy-making in contemporary Japan based on state-centric and society-centric thinking as follows.

State Follows Industry

McKean has pointed out that recent studies of policy-making have showed that the bureaucracy and the LDP respond to demands from well-organized trade associations.[71]

Theory of Regulation

According to George Stigler, who developed a theory of regulation, the regulated will usually capture their regulators.[72] Stigler's logic is that commercial interest groups obtain regulation from politicians to enhance their profitability. As a result, regulation can transfer profitability from the consumers' hands to the regulated groups because consumers are not a well-organized group.

Collective Action

Using collective action theory, Rosenbluth has pointed out that interests in society facing the lowest barriers to getting organized are most likely to be successful in capturing their regulators, and those groups showing social/economic benefits are generally more successful in obtaining favorable regulations for themselves. On the other hand, diverse interests cannot protect themselves through regulation. Members of the general public face high transaction costs in getting information about their interests across to regulators yet such information generates only small gains. In general, regulation produces a small number of winners and a large number of losers.[73]

Market Conforming

In the context of the society-centric approach, case studies have shown how policies made by a ministry are oftentimes rejected. For example, in Gregory Noble's study of video equipment under development, Ministry of International Trade and Industry (MITI) was unable to standardize video tape, video disk, and camcorder formats.[74] In general, a ministry tries to lead the industry with an ambitious plan, but the industry wants to go by itself.

However, in examining policies for declining industries, Mark Tilton found that MITI had delegated both policy-making and implementation to the industry by allowing them to form cartels and to manipulate prices and long term production capacity. A ministry such as MITI will follow the lead of industries depending on whether the industries are concentrated, fragmented or highly competitive, which is called a "market-conforming" approach to regulation.[75]

Corporatism

There are examples of interest group success in Japan. However, interest groups don't always obtain what they want. Richardson has argued that Japan's interest politics are corporatist and that only interests having close ties with the bureaucracy and ruling party are ultimately successful.[76] It is an "intimacy and interdependence with, and vulnerability to, government control, as well as to certain groups."[77] On the other hand, Richardson has noted the proliferation of interest groups in Japan and the frequent sharp differences of opinion between the special interests and those of government, revealing a new pluralism.[78]

Changing from State to Society-Centric

T. J. Pempel, who formulated the bureaucracy dominant approach in the 1970s, later changed his position to a society-centric approach, noting that the bureaucracy had lost its earlier power.[79] Lee Farnsworth pointed out that the power to influence policy can be acquired by entering the LDP as a politician not just through a bureaucratic career.[80] Margaret McKean pointed out that the arena for Japanese decision-making has been shifting from the bureaucracy to the Diet, that policy experts in the LDP (*zoku giin*) rather than the bureaucracy are the ones who pose legislation, not the other way around.[81] This is seen as evidence that the LDP's power comes from the interests of societal actors.

The once-dominant state-centric approach has been aggressively challenged by a society-centric school of thought. As constituency group fragmentation has increased since the 1970s, the mass of middle class, called New Middle Mass (NMM) voters have forced the dominant LDP party, a "catch-all party," to equally distribute policy interests to widely cover voters, such as a special annual tax cut budget package to appeal to the widest number of voters in Japan. Empirical evidence seems to show that state power and bureaucracy dominance are declining.

State-Centric and Society-Centric Approaches in Deregulation

Vogel's New Paradigm

Since the 1980s, domestically increasing demand for liberalizing Japan's domestic market and economic competition have overwhelmed Japan's policy-making processes. From the state-centric point of view, the policy-making process creates a kind of political competition among interest groups with oppositional interests, so that making a satisfactory policy is a difficult task.

World-wide competition has forced Japan to remove many state-based controls, and policy implementation based on government-business partnerships has become less comfortable. One bureaucratic response to this trend has been to delegate decisions to others by deregulation and to put certain industries into a freemarket. In this context, there is a suggestion of stronger markets and weaker government. The general assumption in loosening regulation is to let the market operate freely, which is at odds with both the society-centric and the state-centric paradigms.

Internationally, Steven Vogel sees the re-emergence of the state-centric approach. He has argued that what is happening in the world in terms of regulating markets is reregulation, not deregulation because the process has been driven by the state not private interest groups.[82]

Vogel insists:

> 1. The governments of the advanced industrial countries have reorganized the manner in which they control private sector behavior, but they have not substantially reduced the degree of control. There is often a logical link between liberalization and reregulation, that is liberalization requires reregulation.
>
> 2. The state, rather than the private sector, has driven the reform process. This proposition contrasts with the predominant school of thought on the politics of regulation which suggests that interest group pressures are behind both regulation and deregulation. Government agencies were not in a position to ignore the demands of private groups, but they generally took the initiative in proposing reforms and in molding politically acceptable bargains.
>
> 3. The governments of the advanced industrial countries have not converged in a common trend toward deregulation, but they have diverged by combining

> liberalization and reregulation in markedly different ways. This proposition contrasts sharply with arguments that suggest that the universal logic of economic forces has compelled governments to respond in a particular deregulatory way.[83]

Interestingly, Vogel found that there was a difference in the way Japan and Britain approach regulation. Vogel emphasized the uniqueness of Japan in that the Japanese government managed liberalization to prevent the failure of industries and protected its regulatory discretion and maintained its supervisory capability to guide industry.[84]

Japan as a Reactive State

When considering Japan from an international relations point of view, Kent E. Calder looked at what Japanese foreign economic policies are and how they came to be that way.[85] Calder introduced the concept of the "reactive state," which denies any strategic intention on the part of Japanese policy-making. In this context, the U.S.-Japan alliance was important in international considerations of Japan because it influenced Japan's foreign economic operations. Calder explained the reactive state as follows:

> The reactive state interpretation merely maintains that the impetus to policy change is typically supplied by outside pressure, and that reaction prevails over strategy in the relatively narrow range of cases where the two come into conflict. Thus, ambiguous foreign demands may serve, through deft strategic redefinition within Japan itself, as a stimulus for enhancing Japanese competitive capabilities.... But institutional difficulties in initiating pro-active policies handicap Japan in pursuing strategic interests in multilateral settings, a reality becoming more important to both Japan and the international economic system with the decline of American pre-eminence.

In applying "reactive state theory" for Japanese deregulation movement, international pressure is the most effective way for the domestic marketplace to be persuaded to change voluntary as well as persuade constituencies that deregulation is important globally.

Calder found the foreign economic policies of the reactive Japanese state to be less pro-active than those of the major European powers because of Japan's private-institutional barriers to rapid foreign economic penetration; however, when facing explicit foreign pressure, Japan had been more forthcoming with specific, formal policy changes than is generally realized.[86] However, even in this context, Calder acknowledges Japan's bureaucratic handling of cases with policy implications.

> The problem of domestic coordination is compounded in Japan by the lack of both a functionally oriented administrative corps and authoritative codification of ministerial abilities to dampen bureaucratic disputes over jurisdiction.[87]

The background of this article went back to the 1980s when trade disputes between Japan and the United States were getting severe and domestic interest-group pressures and the Japanese state's sensitivity to them intensified the reactive character of Japanese foreign economic policy making.[88] During that time, Japan made concessions to its foreign trading partners on telecommunications equipment procurements and copyright protection for software. Therefore, it can be said that these concessions were in response to foreign pressures, called *gaiatsu* (foreign pressure).

Domestic Empowerment of the Bureaucrats

Japan has tended to go forward in pluralistic directions socially. As a reflective mirror of social movements, pluralist theory expanded its power in the 1970s, especially when environmental pollution was a serious concern of constituencies and the Social Democratic Party of Japan (SDPJ) was empowered by citizen groups. At that time, a shrewd policy planning group within the dominant LDP political party made concessions to pressure groups by favorably proposing environmental drafts. The LDP has been good at testing political water and making concessions designed to insure its long-lasting political dominance.

In the 1990s, political scandals within the government agencies threatened the stable political structure. All of a sudden, Japan's bureaucracy became a target of criticism because the nation found that what the bureaucrats did was not what the nation had expected.

Shusei Tanaka claimed that the failure of Japan's bureaucratic system was: (1) effective transplantation of values from outside so that the bureaucrats could achieve outside-defined targets and (2) powerful effective enforcement power from outside which refers to establishing an independent agency to check the bureaucrat system of Japan.[89]

When researchers seek to understand the functioning of Japan's bureaucracy, they most frequently mention and research the Ministry of Finance (MOF) of all ministries. Financial and budget planning are common targets of domestic and international scholars in political science for there they see the exercise of power and influence, Japan's financial bureaucrats have over national planning from their position of allocating the annual budgets of related agencies. Yasuhiro Tase has criticized the current bureaucratic system as a suicidal phenomena of national policy planning because of the now-revealed financial support and individual bribe scandals that plagued Japan in the 1990s.[90]

In 1997, Hiroshi Kato, a highly responsible person on a review committee for the Japanese government, expressed a strong desire for restructuring and reforming Japan's bureaucratic system. Kato acknowledged the value and importance of Japan's bureaucracy in shaping Japan's social system after World War II, but this success was achieved by the protectionism executed by the bureaucrats. Kato thinks that Japan's political and economic reforms are ten years behind compared with other industrialized countries. Kato argues that the complication of preparing drafts for the Diet and mastering the technocratic knowledge needed for new technology planning have been barriers for politicians and the nation to break into the fortress of Japanese bureaucracy. Kato claims that bureaucrats increased their power dramatically when the world changed technologically. The bureaucrats used their access to information to dominate policy-making processes.[91]

Theory Considerations in Japanese Broadcast Policy Analysis

The debate over different models is largely based on power concepts: who decides, who controls, who has influence, who governs.[92] Different studies offer findings and conclusions of specific case studies and suggest which model needs to be recognized as competing or complementary in a particular political arena.

Many researchers have used the case study method in examining Japanese political processes.[93] In the study of the Japanese broadcast policy-making process, a number of studies have been published - mainly in Japanese - but almost all are descriptive and lack a theoretical base.

For example, in 1989 when the Broadcast Law was revised, the only English scholarly journal specializing in Japanese broadcasting, *Studies of Broadcasting*, issued a special edition about broadcasting legislation in Japan.[94] All six articles, by Omori[95], Hattori[96], Komatsubara[97], Hamada[98] and Hasebe,[99] addressed Japan's transitional broadcasting framework. One of the weaknesses of their articles was that they sought to explain the issues and introduce the new technologies without any theoretical framework. In general, there are plenty of theoretically supported studies about policy-making in financial and industrial policy. There are few theoretically based empirical case studies that analyze the framework of broadcast regulation in Japan.

The tendency to neglect the theoretical underpinnings in broadcast policy-making in Japan is similar to the situation in the 1970s in the United States. Krasnow and Longley pointed out at that time that many of the works dealing with the political aspects of regulation were very limited.[100] Few empirical works were done which described and analyzed the political context of particular regulatory programs.[101] Similarly, the study field of broadcast policy-making analysis of Japan is still immature even in the late 1990s. To not provide an appropriate theoretical framework in the analysis of Japanese broadcast policy-making means that the research cannot go beyond descriptive statements. To pay more attention to the function and outcomes of policies under scrutiny lessens the opportunities to comprehend the entire policy-making process.

Taking into consideration these problematic points, this historical overview of Japan's broadcast policy research attempts to encourage Japanese policy-making which centers upon broadcasting in the digital era. Analyzing policy-making within Japan's broadcast marketplace in the digital transition phase is an ideal chance to intensively deal with various political movements as core factors of broadcast policy-making. This will involve examination of a variety of factors that have influenced decisions to adopt and pursue radically different media policies.

These include historical and technological factors - especially those closely related to DBS and HDTV development, regulatory factors affecting policy-making, economic factors, such as business operations and market environment, and social and cultural factors which have to do with audience response and societal demands. But, more importantly, Japan's broadcast policy research ought to concentrate on decisions which permit and require a national shift from analog to digital broadcast policy-making processes in the transition from the one technological standard to the other examined, in terms of the influence exercised by political actors in the field of broadcasting.

Setting the lack of theoretical underpinning of past research aside, now is the important period to conduct theoretically armed policy-making research of Japan's broadcast policy. Theoretically framed policy research, instead of descriptive argument and explanations on certain issues, would invite broad input from various scholars relating to public policy-making. The researcher expects that an accumulation of decent broadcast policy research will also have an impact on the other countries' broadcast policy research due to the fact that any researcher can produce results modeled upon a standardized, state-of-the-art study. By doing so, not only domestic, but also international discussions related to broadcast policy-making among scholars will flourish.

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[6] *Ibid.*

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AEJMC Communication Technology & Policy Division

Global 500 companies' outreach to worldwide consumers online: A content analysis of corporate web sites to evaluate organizational and intercultural communications

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Abstract:

A content analysis of 60 Global 500 corporations' web sites was conducted using a computer-aided tool specifically designed for analyzing online presence by corporations. The companies' levels of revenue were used to determine if corporate strategies vary based on their position on the Global 500 list. The results conclusively indicate that visual cues account for lack of multilingual options and that companies' country of origin affects predomination of English as the lingua franca.

Ohmae's (1995) definition of a borderless society comprised the four elements of investment, industry, individual and information technology. Taking these elements together makes it possible for economic units to reach any part of the world and access consumers, otherwise bounded by national or social demarcations.

The global corporate landscape has changed the viability for companies to extend their businesses into culturally varied markets. The combination of deregulation and privatization (Gershon, 1997) of global economies has further contributed to the changes in the international business arena. As multinational corporations (defined as nationally based companies with overseas operations in two or more countries (Gershon, 1997, p.4)) exercise a significant impact on the information flow of ideas and practices, this impacts the manner in which the remaining industries function as well. As Bagdikian (1990) reflects,

> Market domination corporations in the mass media have dominant influence over the public's news, information, public ideas, popular culture, and political attitudes.

One of the main aspects to be approached in international communications, which also ties in with corporate communications, would be the movement toward content neutrality. Is there homogeneity in the kind of messages that are being directed at consumers, given that the world in itself is seen as a market rather than individual societies? Or is there an adoption of technology that best suits the purpose of reaching as many consumers as possible, with few economic-based barriers to limit the communications?

It becomes exceedingly important to analyze the role of intercultural communications since even if companies are addressing nations of consumers, compartmentalizing them in terms of cultural variability would in fact be a better business strategy. As mentioned by Porter and Samovar (1985, p. 20), "intercultural communication occurs when a message producer is a member of one culture and a message receiver is a member of another." When multinational corporations (MNCs) communicate with their global clientele, it becomes necessary to note the overlap in perceptions and attitudes and attempt to cater to these requirements rather than conform to a strict code of standardized communications.

Since the Internet promotes heterogeneity in communication, it can be seen as, one of the tools that can be used to foster international communications by companies. Given that it does not conform to any particular economic plan or is limited by infrastructural concepts, makes it the most viable tool in providing and disseminating information to global audiences. The ability of the Internet to facilitate communication suggests that in the face of the information economy, this practice of information exchange and cultural flow would be of benefit to MNCs.

This research explores the extent to which organizational communications conforms to homogeneity when aiming at a variegated population online. It is important to assess if companies are specifically addressing audiences/users by relying on visual content to account for language differences, which may hinder understanding of text. Also, since the Internet reaches out to a worldwide audience, we need to evaluate if companies provide multilingual options for viewing their web sites or if they hone their users into viewing content in English?

Theoretical Foundation

As Euske and Roberts (1987) reflect, organizations are dynamic processes in themselves that interact with their environment. Using this as a starting point, it is pertinent to discuss concepts of technology as it is utilized by companies, while, also addressing organizations as cultures in themselves.

Steinfield and Fulk (1987, 1990) and Beniger (1990) refer to the role of theory in research on information technologies in organizations. As Allen (1984, p. 15) mentions, the goal of volume of information is to "provide a foundation for theory development on information technology in organizations." When referring to the organizational models and theories, the "Big Communication model" by Gershon (1997) comes to mind. This model is an extension of the media richness model, which looks at the selection of the most appropriate technology based on the complexity of the task. When the Internet is selected for use, its purpose is in alleviating problems involved with traditional media forms. These forms have previously limited the global reach of companies.

The Lewis model is based on the definition of communication to be the "sharing of messages, ideas, or attitudes resulting in a degree of understanding between a sender and a receiver. " (Lewis, 1980, p. 54). The four elements that have been identified within this model include:

a. Organizational communication occurs as a complex open system
b. Organizational communication involves message flows, patterns, and channels
c. Organizational communication considers the goals of management, the process of change, innovation and growth and,
d. Organizational communication involves people's attitudes, feelings, relationships, and skills. (p. 54)

Within the proposed model, the area of interest would be in combining international communications with the semantic net and frame of reference as identified by Lewis. The semantic net can be broadly defined as the network of meanings or associations made with words, which are available for recall. The frame of reference as defined by Lewis (1990, p. 54) refers to "the person's background, attitudes, prior knowledge, and experience accumulated since birth." Not only does it becomes societal-level based, the degree to which the frame of reference can vary between individuals justifies the need for an accommodative, adapted communication strategy. The differences in languages and vernacular dialects across the world also suggest that in communicating, regardless of the medium, an MNC would have to acclimatize its target message.

Mowlana (1996, p. 104) refers to language as "an active agent in structuring meanings and relationships." Similar to culture, language can be seen as a means to convey beliefs, values, perceptions, traits and norms indigenous to a group. Perhaps, language is a medium, which carries the culture's "world-view" (Pennington, 1980, p. 33) such that built into the verbal and non-verbal aspects of language are a society's perceptions, judgments and processes of reasoning (Pennington, 1980).

The role of language in international communications cannot be understated. While questions posited of international communications center around content, use of technology, evaluating the cost-benefit ratio and ease of access into societies, very little emphasis is placed on language. As Mowlana (1997) mentions, the key deficiency lies in not looking into whether various language alternatives are offered to different groups within society or if there is a predominance of one language. This research examines the degree to which companies incorporate a multilingual approach as they present their information on the Internet. Or if English has grown to become more than a language of business, i.e. is it the lingua franca of international corporate communications online? While not indulging in concepts of cultural imperialism, it becomes necessary to also examine if there is in fact a "new international information order" (McBride, 1980). As the audience for the information transmitted is heterogeneous, it implies that the relationship between the sender and the receiver cannot be bounded by the same "interpretational rules" (Yaple & Korzenny, 1994, p. 308).

However, there is a movement toward cultural synchronization, which allows MNCs to create and maintain a global marketplace for their products. The net result of this is a "diachronic flow of information where diversity, independence, decentralization are given preference." (Yaple & Korzenny, 1994, p. 309).

As mentioned by Gudykunst, Ting-Toomey, Hall and Schmidt (1994), language has to be looked into from the socio-psychological and socio-linguistic angles such that it lends itself into defining intercultural communications. When determining the level of communication, the three dimensions that can be broadly defined would be:

a. Symbols - are they accurate in transmitting the message?
b. Meanings and associations - is there a semantic problem in interpreting the information provided?
c. Effect and affect - is the meaning received impact the behavior of the individual favorably or otherwise?

This paper examines the first two concepts to obtain insight into the balance that companies reach in trying to juxtapose language (the written word) and visual cues (in terms of pictures, icons, images and photographs), which may complement or compensate for any misrepresentations or ambiguity.

Applying the Diffusion of Innovation theory

If the level of penetration of Internet use by consumers is reaching near-critical mass, it would mean that accessing them would be an easier task for organizational communications online. The diffusion networks concepts apply most in explaining the manner by which the "modeling and imitation by potential adopters of their near-peers' experiences who have previously adopted a new idea." (Rogers, 1995, p. 304). Especially in viewing from the organizational communications angle, the degree of interconnectedness between companies and the overlap in the audience/target market suggests that the level of competition would determine adoption of innovation. That is, the organization can use information technology as a tool to gain competitive advantage when it functions on a global scale (Manheim, 1993).

Rogers (1995) and Markus (1987) explain the notion of critical mass as being the state that is reached if enough individuals have adopted an innovation such that any further rate becomes self-sustaining. While the analysis by Rogers (1995) suggests that there should be some interdependence between the communicating elements such that it is also important to note that in the corporate world, the output of a system is the input of another. Given the age of interconnectivity, access to consumers is crucial. Competition then serves as the determinant in employing the Internet as the most efficient means in conveying information to the consumer. As Markus (1990) points out, with interactive communication technologies, the concept of interdependence is more reciprocal in nature such that the later adopters can influence early adopters and vice versa. The versatility of the adoption of interactive technology implies that the state of optimal reach is based on the efficiency in reaching consumers and conveying information with minimal distortion and misinterpretations.

The adoption of the Internet in this study is used as the basis of comparing the content of information relayed to the global consumers. The proportion of language (semantic content i.e. text and visual cues) as well as the provision for multilingual options are in also constantly being redefined based on industry standards. That is, MNCs have "adopted" the customization approach to providing information to their consumers, tailoring language and visual cues, in such a manner to gradually boost interest and sustain loyalty. This is measured in terms of revenue and number of hits per site. This paper addresses the extent to which revenue determines the flexibility of an MNC and its ability to reach out to its clientele.

Previous studies have examined the web sites of Fortune 500 companies [(Li, McLeod & Rogers, 1993), (Liu, 1997) and (Ho,1997)]. However, these have been along lines of assessing the web site from the customer's viewpoint and seem to adopt a public relations viewpoint to determine company presence online. This research paper examines the degree to which visual content accounts for textual variations and the extent to which country of origin affects or tailors content in English. This would help determine the net effectiveness with which companies operate on a global scale or if indeed content online has come to rely on non-textual orientation to compensate for multilingual options.

In hypothesis one, revenue has been used as a means of determining the overall reach of an MNC and assess its scale of operations. Relating to Manheim (1993), as globally competing organizations grow in scale, they are more likely to search for more effective mechanisms to better reach a larger clientele or consumer base.

H1: Companies with higher levels of revenue are likely to provide for multilingual options as compared to companies with lower levels of revenue.

Hypothesis two refers to a blend of the concept of "imperialism" and the demands of competition in the business environment. This is founded in the belief that companies from countries with English as the official language are more likely to perceive the global marketplace as homogeneous, such that information in English connotes a certain sense of identity. The polarity of this concept is that, while English is used to create a perception of a company reaching a market defined by status or similar associations (for e.g., Coca Cola Company), it is also employed due to the assumption that Internet consumers should have some knowledge of English.

H2: Companies from countries with English as the main language are less likely to provide for multilingual options as compared to companies from non-English speaking countries.

In hypothesis three, measuring the effectiveness of communicating to an international audience would require a more focussed approach. MNCs which provide for multilingual options can be considered to be adaptive to their consumers' cultural differences, such that these corporations would be more likely to enhance their reach in providing for more visual representation rather than relying solely on text.

H3: Companies, which provide for multilingual options are more likely to rely on visual rather than textual content, to communicate (and perhaps "compensate" for translations) with global audiences in their web sites, as compared to companies which do not provide for multilingual options.

As for hypothesis four, companies from non-English based countries may be more apt to convey their message with more emphasis on visual elements. This would probably be dictated by a concern if consumers may misinterpret the information or if translations may connote different meanings.

H4: Companies from non-English countries are more likely to rely on visual cues as compared to companies from English speaking countries, all other aspects being equal.

Based on these research interests and propositions, a content analysis of corporate web sites was conducted. The list utilized for the study is the Global 500 table, which provides in rank order, the companies that have earned the highest levels of revenue.

Methodology

The first 120 companies on the Global 500 list were taken to represent the high level of revenue, the middle 120 (i.e. 60 companies from 200 to 260 and 261 to 321) for the middle level of revenue, and the last 120 companies to represent the low level of revenue. The homogeneity in terms of sampling applies specifically to the variable used for stratification, the level of worldwide revenue.

The selection of the sample was determined by conducting a systematic sampling method with a random start for all sub-sets. To conduct a content analysis on 60 companies, 20 elements were selected from each sub-set. This was determined by taking the k^{th} element (6 in this case) with a random start (any of the first to tenth elements) from each of the three sub-sets. This was to obtain at least 20 elements from the high, medium and correspondingly the low levels of revenue sub-sets.

First a search was conducted using the browsers available on the system to identify if the company has a corporate headquarters or a web site accessible worldwide (rather than a .com extension which maybe due to the location of the server in the U.S.). The URL or web address was then used along with the rank value in tabulating the final list of 60 companies re-ordered according to the levels of revenue.

The corporate profile page was then used as a unit of measurement. This was founded in the belief that most companies would post their corporate profile and background to convey their presence to their global customers. A java applet tool was designed to work as an aid to load and measure the web page contents based on the scheme of visual and textual content. The corporate web page was then captured to evaluate the proportion of visual cues to textual content. Also, the presence of white space defined as the area that does not contain either attributes of text or visual content was recorded in terms of proportion of the web page. This was to obtain values regarding the design of the web sites and also to observe patterns of non-linearity in the presentation of content.

The tool facilitated the measurement of the overall area (in terms of pixels) of the web page and based on the user definition of visual and textual content, allowed for measuring the exact area occupied by each attribute. To further the analysis of the web sites, the proportion of active content was also taken. Active content was defined as the visual cues and text, which were "clickable" or were links to pages either within the company web site or related subjects or industries. This was to examine the hierarchical nature of the web site, as compared to static content in other media forms.

The web sites were then evaluated based on 2 other variables, official language at country of origin[1] (as indicated by the country where the company was based, obtained from the background pages of the web site) and provision of multilingual options (either in the start-up or in the company profile pages).

The coding was conducted over one week (Nov. 9-16, 1998) and coding guidelines were instituted in order to ensure consistency in measurement. (Refer to Appendix 1). This was especially important since subjectivity in differentiating between text and visual content could affect the reliability of the estimates. 9 web sites were selected (3 from each revenue category of high, medium and low) and reviewed by a coder to determine the valence in measurement. The Scott's pi was 0.68, which is considered to be good given the complexity in defining certain elements measured in this research.

Results

The basis of analyzing the web sites was to also determine the imperative in setting up one to remain competitive and to achieve optimal reach. However, 10% of the initial sample of 60 companies were not accessible or linked with search engines such that evaluating these 6 web sites was cumbersome and the measurement of the branch-offices' (as opposed to the corporate headquarters') web page was inaccurate.

The process of ensuring that the coding guidelines encapsulated all possible definitions of textual and visual references can best be described as iterative. Given varied design styles and markedly different presentations, the rigidity of the definitions ensured that the measurement tool was put to use in capturing the proportion accurately.

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[1] Identified as Australia, Canada, Great Britain, New Zealand and the United States.
Source: http://www.intelliquest.com

Out of the 60 sampled web sites, 36.7% provided for multilingual options, while the remaining 63.3% did not present the option of selecting an alternative language to view the documents online. In terms of representation from countries with English as the official language, 51.7% of the sample were companies from English-speaking countries and 48.3% were from non-English countries.

Table 1 about here

Most of the web sites seem to have at least 25% in terms of textual content, with 71.7% of the companies sampled falling into this category. As for the visual cues, 56.7% of the web pages fell into the range of more than 25% and perhaps close to half in terms of visual representation of information. It is noteworthy to mention that none of the web sites were entirely visual or had a significantly large textual content either (i.e. above 75% of the overall area).

Table 2 about here

H1, which refers to the provision of multilingual options by companies with higher levels of revenue as compared to those with lower levels, was not significant at p<.05. Though the Cramer's V level showed a positive relationship, the value at .272 seems to reflect the lack of strength in explaining the provision of options using revenue as the sole criterion.

Table 3 about here

Table 4, on the other hand, reflects that H2 was supported. A cross-tabulation between the provision of multilingual options by English as the official language in company's country of origin shows a positive relationship (phi = .579, df =1, p<.001). Furthermore, the results reflect that 90% of the companies from English-speaking countries are more likely to present their web sites in English without any provisions for other languages. Correspondingly, approximately 66% of the companies from non-English speaking countries provide for multilingual options.

Table 4 about here

The results in Table 5 reflect that the proportion of visual cues is linked with the provision of multilingual options as compared to the proportion of textual content. Independent t-tests conducted for textual and visual cues by provision of multilingual options (Table 5) indicate that proportion of visual content is dictated by the difference in provision of multilingual options (t =2.56. df = 44, p<.05) while textual content was not statistically significant (t = -.48, df = 58, p = ns). This implies that H3 was supported.

Table 5 about here

The fourth hypothesis which refers to the degree to which textual and visual cues are "affected" by English being the official language at the company's country of origin was also supported. The results (Table 6) from the independent t-tests conducted indicate that the textual content is determined by whether the company is from an English as opposed to a non-English country (t = 2.08, df = 57, p<.01). Similarly for visual cues, the results show that the proportion of visual content depends on the language at the company's country of origin (t = 2.34, df = 58, p<.05).

Table 6 about here

Discussion

The use of the Internet as a medium of communication suggests the level of competitiveness in accessing the consumer base. As indicated by Evans and Wurster (1997), there is a significant difference in the definitions of reach and richness. As compared to traditional media, the Internet due to its unregulated nature (which may well be it bane) is capable of removing network-bound channels of information exchange. To the organization, which favors the reach in targeting at a global audience, this seems to be the low-cost, expedient method in establishing interactivity (i.e. richness is only marginally affected).

While these companies form the crème of the corporate world, garnering revenue levels far above that of companies with a localized feel, it is important to reflect upon the level of competition that they are propagating through introducing mechanisms that demand consumers' attentions. By providing multilingual options, the companies not only provide information to data-consumers around the world, they are presenting themselves as being sensitive enough to adapt to the language and cultural dictates of individual countries and the corresponding societies. Through the presentation of visual cues to correspond or even compensate for any meanings and implications lost, the companies' web sites have become effective tools to communicate with the large and growing consumer base.

In terms of variability, companies with lower levels of revenue seem to be adopting the use of multilingual web sites as a means to gain better reach. As the results indicate, 25% of companies in the lower revenue levels provide for multilingual options as compared to 55% in the high revenue category. The results from this study allow us to infer that there is a difference in the level of adoption between companies, based on revenue levels[2]. The companies classified at the medium revenue level also indicate that there is a positive movement toward incorporating this attribute as part of the web site (30% have multilingual options).

This parallels Roger's (1995) diffusion research regarding the level of adoption by companies though, at a more global level the use of the Internet has only now achieved a high level of permeation and adoption by companies. As Rogers states, the size of the organization is positively related to its innovativeness: that is the larger the company, the more innovative or likely it is to adopt innovations to remain competitive (Roger, 1995, p. 379).

Perhaps one of the main concerns here is the predominance of English as the lingua franca online. While companies from non-English countries, do provide the mirror sites in the native language, there seems to be a shift toward English being the language of the Internet. This imperative to conform to using English parallels the proportion of world online users who are Native English speakers.[3] However, it would be essential to examine the role that language plays in information processing. If the patterns of decoding information were semantically based or subject to the parallels in visual content, the organization would have to review the impact that information in English would have on a non-English speaking audience. As mentioned by Gudykunst, Ting-Toomey, Hall and Schmidt (1989, p. 145), "language is an abstract system of rules (phonological, syntactic, semantic and pragmatic)." The adaptation and subsequent modifying to reach as many people with varied backgrounds requires immense understanding of the underlying cultures and language differences. Furthermore, individual perceptions are tied in intrinsically with knowledge acquisition and cultural variability such that the same stimulus, in terms of information provided, need not influence behavior in similar ways.

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[2] The level of significance in this case was at $p<.1$. Though the results were not significant at $p<.05$, given a larger n value, there is a strong likelihood that a pattern of adoption can be established.

As the results indicate, organizations seem to place emphasis on the effect that visual cues have in establishing patterns of association with the company. Moving away from translations, the role of visual cues seems to be in permeating across vernacular and idiomatic variations in languages. However, one possible problem would be an over-reliance on visual cues to disseminate information, which may well be founded on generalizations or possible misrepresentations.

Furthermore, the consumer's frame of reference which is defined as "the attitudes, background, prior knowledge and experience," (Lewis, 1980, p. 54) is a significant determinant of the consumer's perception of different cues (textual or visual) over and above individual preferences. The semantic net (part of the Organizational Communication model) is defined as "the network of meanings and word associations available for recall," (Lewis, 1980, p. 54). According to the model, the environment dictates the level to which communication occurs without misinterpretation attributable to "wrong" decoding of information due to cultural variability and language interpretation.

The method employed in web design for organizations is not merely dictated by visual appeal and presentation, though these two factors are crucial elements in themselves. The layering of web sites reflects a pattern of links which companies use to increase the level of involvement of the information seeker. The dynamic nature of the web site, with the proportion of active content, suggests that the user's role in gathering information is incremental if not step-wise. While there is a sense of homogenization in terms of taking the user through a set pattern of links, the onus falls on the individual to include or exclude information presented to him/her. This is done through moving into a new location within the corporate web site or based on need assessment, obtain search results for competitors' sites and product offerings.

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[3] According to http://www.euromktg.com, 61.8% of the world online population (estimated at 141.3 m) are native speakers of the English language. The deficiency in using country of origin as a measure would be that it conforms the users to a geographically bound community, while it is equally likely that those speaking the same language are apt to form their own online community.

There are four aspects, which constrict the implementation of this analysis. The unit of analysis, in this case, the corporate web site could represent a consortium of companies such that observations made regarding the differences in the usage of text and visual cues may be applicable for the group rather than the members of the consortium. Secondly, fonts can be set at the user' end such that the impact of the visual cues may vary since the measurement is based on the area that is occupied by visual and textual cues. It is beyond the scope of this paper to assess the change in terms of impact if the font size were changed. Also, the existence of a text-only version may determine if images are viewable at all. Some web sites provide this option in order to eliminate any differences, which may exist and this could affect the reception of content on the web site. The implication of this option is that reliance on language grows to 100%.

Also when taking into account the provision of multilingual options, it is important to note the language used in the start-up page. A significant number of companies tended to provide the first page in their native language and then a mirror-site in English, such that the web site as such can only be termed bilingual. Furthermore, given restrictions in countries such as France to post information in the national language suggest that the regulatory environment may have a large impact on the manner in which the information is presented. In trying to determine if the official language at the company's country of origin is English, this tends to exclude segments of the population proficient in the English language. Taking India for example, there is a strong correlation between the group with access to the Internet and working knowledge of the English language. Perhaps, this assumption reinforces the manner in which Internet cultures do not conform to national boundaries.

While several other studies have been conducted on the level of interactivity of the Internet in reaching the critical mass, it is important to note that network economies of scale can only be achieved if all possible consumers or clientele were interconnected. This desired stage may well be possible if as Rogers (1995, p. 315) mentions "enough individuals have adopted an innovation so that the innovation's further rate of adoption becomes self-sustaining."

As companies grow toward a commonality in setting up web sites with corresponding reach and provision of specific options, the question arises if these are indeed new standards, which will have to be adhered to, to maintain a state of competitiveness. That is, are we moving toward establishing order in a boundary-less environment?

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Table 1: Percentages for levels of revenue and provision of multilingual options in company web sites

Variables	%
Levels of Revenue	
High	33.33
Medium	33.33
Low	33.33
	100%
	(N=60)
Provision of Multilingual Options?	
Multilingual (Yes)	36.7
Non-Multilingual (No)	63.3
	100%
	(N=60)
Is English the official language at company's country of origin?	
English (Yes)	51.7
Non-English (No)	48.3
	100%
	(N=60)

Table 2: Means and Standard Deviations for visual and textual cues.

Variables	Mean	Std. Deviation	N
Proportion of visual cues in web-page*	1.600	.53	60
Proportion of textual cues in web-page*	1.317	.54	60

* Absolute values were re-coded into groups: 1 = 0-25%, 2 = 25.001-50%, 3 = 50.001-75% and 4 = 75.001-100%.

Table 3: Cross-tabulation of provision of multilingual options by levels of revenue.

	Levels of Revenue		
Is there provision of multilingual options?	High	Medium	Low
Multilingual (Yes)	55%	30%	25%
Non-multilingual (No)	45%	70%	75%
	100% (N=60)	100% (N=60)	100% (N=60)

$X^2 = 4.45$
df = 2
Cramer's V = .27
p = ns (.11)

Table 4: Cross-tabulation of provision of multilingual options by English as official language in company's country of origin.

Is there provision of multilingual options?	Is English the official language at company's country of origin?	
	Yes	No
Multilingual (Yes)	9.68	65.52
Non-multilingual (No)	90.32	34.48
	100% (N=60)	100% (N=60)

$X^2 = 20.12$
df = 1
phi = .58
p<.001

Table 5: Independent t-tests for textual and visual cues by provision of multilingual options.

Variables	Multilingual Options Yes Means (& SD) (N=60)	No Means (& SD) (N=60)	t-value	df	sig.
Textual Content*	1.273 (.550)	1.342 (.534)	-.48	58	ns
Visual Content*	1.818 (.501)	1.474 (.506)	2.56	44	p<.05

* Absolute values for proportion of visual and textual content were re-coded into 1 = 0-25%, 2 = 25.001-50%, 3 = 50.001-75% and 4 = 75.001-100%.

Table 6: Independent t-tests for textual and visual cues by English as official language in company's country of origin.

	Is English the official language at company's country of origin?				
Variables	Yes Means (& SD) (N=60)	No Means (& SD) (N=60)	t-value	df	sig.
Textual Content*	1.45 (.57)	1.17 (.47)	2.08	57	p<.01
Visual Content*	1.45 (.51)	1.76 (.51)	2.34	58	p<.05

* Absolute values for proportion of visual and textual content were re-coded into 1 = 0-25%, 2 = 25.001-50%, 3 = 50.001-75% and 4 = 75.001-100%.

APPENDIX 1

Coding Guidelines

1. Coders will be provided the web pages to be analyzed and evaluated for the variables.
2. The tool for measurement (i.e. the java applet) will also be started from the web browser for the coder's use. For a sample of the measurement sheet, refer to the following attachment. The applet loads the required corporate web site and the following guidelines are instituted and computed to obtain the percentage values of textual and visual content.
3. Coding instructions in terms of using the tool are as follows:
    a. Drag the left mouse button to encapsulate the entire area of captured web page. Click on the total area button.
    b. Similarly, drag the mouse button to form a box over the visual cues. Further additions to the count of visual cues can be made upon drawing around the specific image and visual cues and clicking on the Visual Cues button.

    Visual cues are defined as:

    1. banner ads
    2. logos and company insignia
    3. pop-up menus
    4. pull-down bars and options
    5. hyper-linked images (which upon clicking the right mouse button can be saved as image files for e.g., as GIF or MPEG files).
    6. text within boxes, i.e., buttons
    7. company names that appear as text but can be saved as image files
    8. frames (partial separation of the web page into divisions)
    9. lines and demarcations
    10. bullet points (active, based on whether they can be clicked on)
    11. photographs and image galleries
    12. icons
    13. graphs, figures and charts
    14. audio files (e.g. Quick Time) or video files such as MPEG files
    15. animations

4. Text is defined as any words, phrases, and letters that are presented in prose or heading format. For this research, the active text (hypertext) is to be tabulated by clicking the "ratio" buttons. The "white space" button provides the proportion of the web that is devoid of text or visual cues.
5. Provision of multilingual options is another variable to be measured. From the web page provided, the coder would have to scroll the page up and down to examine if an alternative language is provided. This is in the event of pages loading in a native language such as Japanese with English as an alternative language to use to view the web pages. (Yes for multilingual options and No for no options provided)
6. Country of origin determined by researcher and verified by coder based on company background page and official language at country of origin.

   English-speaking: United States, United Kingdom, Australia, Canada, and New Zealand.

   Non-English: Others

   (English as language in country of origin = 1, Non-English = 2).

Internet Uses and Gratifications: An Online Survey of Bulgarians at Home and Abroad

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Internet Uses and Gratifications: An Online Survey of Bulgarians at Home and Abroad

Introduction

One of the fastest developing technologies of today's communication world is the Internet. The global "network of networks" provides access to information to people all over the planet, and allows exchange of information and open discussions on various topics across national borders. Yet very little attention has been paid to the ways in which people use the Internet on the individual level. Even less attention has been paid to non-English speaking populations' Internet behavior. This study focuses on Internet use of Bulgarians in Bulgaria and Bulgarians abroad. The paper examines the question of whether the two populations differ in their Internet usage, and if so, how.

This exploratory study looks at the role the Internet plays on the individual level of a specific national group. The study relates the uses and gratifications theory to Internet use. The findings may suggest differences in the uses across groups with different demographic characteristics. Some differences and inequalities between the two populations of interest are explained with the diffusion of innovations theory arguments, which relate the adoption and use of new technologies to other variables on the social system level. The study also makes some methodological contributions to conducting Internet surveys, which can be used in designing future Internet research studies.

Finally, researching Bulgarian online usage will fill a gap in the literature about Bulgarian Internet users. No such study has been published so far. It is, furthermore, useful to see how the findings of this study may be applicable to Internet developments in Eastern Europe in general.

The global superhighway

The Internet is one of the revolutionary technological advances of the 20th century. According to a January 2000 Internet Domain Survey, there are 72,398,092 Internet hosts in the United States today (ISOC Internet Domain Survey, 2000). The impact of the Internet on the daily lives of millions of people is unquestionable. Arnum and Conti (1998) argue that "[w]hat TV was to the second half of this century, what the telephone and the paved road were to the early 20th century, and what the railroad was to the 19th century, so too is the Internet to the current generation." However, Internet use and communication has not been well researched so far (e.g., Johnson et al., 1999). Historically, most of the communication research literature has focused on traditional media, such as print, radio, and television (Morris & Ogan, 1996). New technologies, including the Internet, have just recently become the focus of mass communication inquiries.

Moreover, the focus of Internet studies has been primarily on the United States (e.g., Daly & Miller, 1998). As the birthplace of the global superhighway, the United States remains one of the countries with highest Internet penetration. Other developed countries are also leaders in the adoption of the Internet. However, it is significant to study whether and how the "global information highway" is used in different countries as well. Such studies will provide insights about the Internet use of non-U.S. populations and show whether they can realize the democratic potentials the Net offers. The next section looks at the development of the Internet in the United States and its spread to other parts of the world.

Internet growth around the world

Even though the media hype has presented the Internet as the fastest growing new technology, the adoption of computers has been slower than the adoption of other new technologies, such as the VCR (e.g., Rogers, 1995). Historically, the Internet came about from a project of the U.S. Department of Defense in 1969. Initially, it was nothing more than an internal network called ARPANet (Advanced Research Projects Agency Network), but even then people in the agency envisioned its expansion to a worldwide, borderless network (Rogerson & Thomas, 1998).

The Internet--or what many call "the network of networks"--has grown exponentially in the United States (http://www.networkwizards.com). However, its spread around the world has been much slower. Most Internet users are still in the United States (Delgado, 1998). Interestingly, a recent ITU report found that Finland is at the top of Internet hosts per capita (ITU Report, 1999). Japan and Australia, in addition to North Western Europe, are among the leaders in Internet penetration (Arnum and Conti, 1998; ITU Report, 1999). Other countries lag behind and have exhibited Internet adoption at a slower rate. There is a distinct disparity of technology and Internet penetration between the rich and the poor, and recent studies have shown that the "global" network is still concentrated among a few countries (Elie, 1998). Bourgeat acknowledged at an ITU conference that "[t]here is currently an enormous gap between developed and developing countries in access to the Internet" (1998, 8). While the goal in the United States is to provide universal access to all libraries and schools, many countries in the developing world are far from setting such goals. Tanzania, for example, has 0.04 Internet hosts per 10,000 inhabitants (ITU Report, 1999). In other African countries like Somalia, for example, Internet penetration is virtually zero (ITU Report, 1999). It is hard to envision universal service implementation in such countries in the near future.

Indeed, while certain prerequisites affect states' adoption of new technologies, it is hard to pinpoint exactly what drives Internet diffusion into different countries. Two main types of factors clearly play a role: economic and technological factors. Gulyas (1998) argues that two basic requirements exist for a society to become an information society: a modern telecommunications network and a developed informatics industry (which basically provides the equipment necessary for Internet advancement). There are costs associated with the Internet for both for connection and the computer itself. Individual computer skills are required to allow adequate use of Internet resources. The third type of factors affecting Internet diffusion identified in the literature are cultural factors (e.g., Maitland, 1998).

The Internet in Bulgaria

The fall of the Berlin Wall left the countries of Eastern Europe facing many political, economic, and social problems. The telecommunications network in Bulgaria and in the region in the early 1990s was outdated, compared to Western standards (Lengel, 1998; Bakardjieva, 1995). To build a new communications infrastructure or to modernize the old one required high capital investment, as Gulyas, for example, notes (1998). The Bulgarian government, like other post-communist governments, had to operate with limited economic resources, and Internet development was not its top priority.

In addition, the economic crisis in Bulgaria allowed very few people to be able to afford a personal computer. The use of computers is becoming more common, but their spread is relatively slow. Both hardware and software are expensive for the average citizen. The average income in Bulgaria in 1998 was the equivalent of $125 (UNDP Report). Connection to the Internet (typically paid by the minute) is also relatively expensive. As in other countries in the region, people tend to use computers at their work place. In Hungary, nearly half of those who have access to computers can use computers *only* at work (Gulyas, 1998).

The former Soviet bloc has been identified as the next area where an Internet boom will be seen (ITU report, 1999), which makes the former socialist republics even more interesting to examine. Internet penetration has followed similar trends across Eastern Europe. The number of Internet service providers (ISPs) in Central and Eastern European countries between 1997 and 1998 has grown about 30 percent, on average (ITU Report, 1999). However, Slovenia, Hungary, and Poland have more ISPs than the rest of Eastern Europe (115.06, 94.12, and 33.72 per 10,000 inhabitants respectively, for 1998) and exhibit higher rates of Internet diffusion than other post-communist states (ITU Report, 1999). In Bulgaria, the number of ISPs per 10,000 people increased from 8.22 in 1997 to 12.3 to 1998. Gradually, more Bulgarians have access to the World Wide Web and other Internet resources. The ITU report found that about 180 Bulgarians out of 10,000 were Internet users in 1998. This increasing significance of the Internet has not been examined in depth so far.

On the pages of the Wall Street Journal, Huber (2000) says that for "the old media, now, it's go digital or die." Like other traditional media, Bulgarian newspapers have moved to the web and are now represented on the Internet. However, it remains unclear which audience they are mostly pursuing. In other words, which markets are Bulgarian news media targeting? One of the purposes of this study is to investigate the extent to which Bulgarian Internet users are, in fact, looking for timely information from Bulgarian online newspapers.

As Chyi and Sylvie note (1998), the electronic newspaper has almost no geographical limits, combined with low absolute-cost barriers to entry. Also, the marginal costs for delivering news to more audiences is practically zero (with only fixed costs playing a role) (Shapiro & Varian, 1999). Chyi and Sylvie (1998) argue that a local newspaper with an online version has a distinctive long-distance information market in the case when the audiences cannot access the

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print edition, but the online version is readily available. Local news media, they say, compete for this long-distance information market with other online newspapers carrying similar content (i.e., intramedia competition). They also compete with other news sites or services that provide similar information (Chyi & Sylvie, 1998). Interestingly, it has been found that the print version of a newspaper is preferred against the electronic one, other things being equal (Perse & Dunn, 1998; Chyi & Sylvie, 1998). However, for a population with no access to the print edition, the online newspaper version may be of particular interest. So there is a potential for local/national papers to generate more revenue when targeting such long-distance audiences, like Bulgarians living abroad, for instance. The question is if there is really a demand: does this long-distance niche exist? The results of this study help answer this question. The findings are relevant to communications researchers, scholars interested in new media, national media management and potential online advertisers.

Potentials of the Internet

The new global superhighway, it has been argued, offers large potentials for both democratic governance and economic growth of the so-called LDCs (Less Developed Countries). It is, therefore, important to study how the Internet is used by people in these countries.

Delgado (1998) says that the Internet is the "key to competition, deregulation, economic growth, social change and high productivity." However, she also discusses a number of barriers to Internet expansion to developing counties, such as the lack of "reliable telecommunications infrastructure, competitive regulatory policies, affordable communications, adequate equipment and awareness of potential benefits." Despite the great possibilities for democracy utilizing the Internet, technological developments and adequate infrastructure need to be in place, as previously noted, before the Internet can realize its full potential for each individual on a global

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level. Also, non-democratic governments have found ways to restrict the full use of the Internet. The KGB successor in Russia, for example, has exerted pressure on all Russian ISPs to screen the Internet traffic of their users (Associated Press, 2000). In China, despite the growing penetration of Internet technology, the central government has engaged in a broad effort to control web content (Taubman, 1998). Content and access regulation are the two most common methods used by governments to control or limit Internet use.

The Internet can change the way we exchange information and the way we communicate with each other. It can change our perceptions of what we consider human communication. The Internet challenges our "definitions of nationhood, the sense of place, and much more" (Newhagen & Rafaeli, 1996, 11). In addition, it has been argued that the Internet has a positive impact on economic development of smaller states. The Internet, in theory, offers promise for developing countries in health and education (ITU Report, 1999). As a limitless network, the Internet allows vast quantities of information and a variety of content to quickly cross geographic boundaries. Transfer of information is relatively inexpensive. The interactive feature is also beneficial to global audiences.

Yet there are some negative social impacts associated with the diffusion of the Internet on a global level. Sexually explicit material has become one of the major issues. Germany and the United States, among others, have tried to restrict access to such material. The Internet provides easy access to guns, for example, or a forum for neo-Nazi groups to communicate. Taubman (1998, 256) argues that "all nations with an Internet presence, regardless of regime type, have identified negative consequences resulting from the Internet," specifically referring to cyberspace pornography. Others have speculated about potential social isolation or Internet addiction.

There is also a danger of keeping the Internet a primarily Western tool for information and communication, using "Western metaphors" (Berdayes & Berdayes, 1998, 121) and shaping the Internet on the basis of an entirely Western value system (Stewart et al., 1998). Rogerson and Thomas (1998, 42) say that "the underlying conceptualization of the Internet is a Western phenomenon. That is, both the physical structure and materials are Western products, and the 'democratic nature' of the Internet is a Western idea." The focus of researchers' inquiries must shift, therefore, to how non-Western communities utilize the Internet as a medium. This shift will help researchers understand how much the dangers outlined here are real.

Uses and Gratifications

Uses and gratifications theory has been applied when examining motivations of people to turn to specific media. Researchers have argued that this theoretical approach is especially applicable to new media technologies (Morris & Ogan, 1996; Williams et al., 1994).

Rafaeli says that the Internet is likely to provide a "venue for a rejuvenation of the uses-and-gratifications type of study" (Newhagen & Rafaeli, 1996, 10). One of the few studies that employs the uses and gratifications approach to examine individual computer use found modest utility in home computers, when examining a random sample in the United States (Perse & Dunn, 1998). The phone survey found that computers are not the main channel for media-related needs (Perse & Dunn, 1998). However, non-American populations may exhibit a different pattern of behavior. Particularly, ethnic groups that live in a foreign country and have limited sources of information about their native country may find the Internet a significant tool to fulfill information or media-related needs. As mentioned above, such a finding will be particularly useful to national/ local media organizations and their advertisers.

The basic premise of the uses and gratifications perspective is that people will use the Internet if they perceive it as useful. In other words, users' perceptions of the Internet as a communication channel will determine whether and how they use it. In addition, different people can experience the Internet as fulfilling different utility functions. For example, some may perceive it as satisfying entertainment needs, while others may perceive it as having an important social function on the individual level. There are two aspects of the uses and gratifications theory: first, the audience believes they will *derive* something from the use of a particular medium and, second, they also believe that the medium offers some content that they *desire* (Perse & Dunn, 1998).

Clearly, uses and gratifications sees the audience as an active participant. This assumption is justified in the case of Internet use because the World Wide Web requires an active user rather than a passive viewer, a state which has sometimes been attributed to television audiences. The Internet offers a wide variety of uses, ranging from obtaining the latest information to entertainment to simply passing time. One of the goals of this study is to see how Bulgarian users in Bulgaria and Bulgarian users in the United States perceive Internet utility, and to test the extent to which the two geographically separated populations differ in the way they use this new communication channel.

Research Questions:

On the basis of the literature review, the study investigates the following research questions:

RQ1: To what extent do Bulgarians living in the United States use the Internet differently than those living in the Republic of Bulgaria?

RQ2: Are there discernible patterns of Internet usage for Bulgarian online users?

Method

The questionnaire used in the study, which was the primary data collection tool, included a total of 17 questions. It was preceded by a letter that described the purpose of the study and explained the potential risks and benefits to participants. The cover letter was posted online at the following website: http://grove.ufl.edu/~mmc6307/index.html. The entire list of questions is given in Appendix A. The Bulgarian text of the survey was posted online at http://grove.ufl.edu/~mmc6307/anketa.html. The researcher also created an English text version of the questionnaire because some browsers cannot load Cyrillic fonts, and that could have prevented a number of people from participating in the study. The identical English language questionnaire was posted at http://grove.ufl.edu/~mmc6307/survey.html.

The unit of analysis was the individual. The researcher created a database of her personal email contacts list of Bulgarians, and contacted each of them, hoping to create a snowballing effect. A total of 26 potential respondents were contacted via email with the following brief announcement: "*Do you want to contribute to knowledge about Internet use of Bulgarians? Please fill out the following survey--it should take no more than 2 minutes, and it is completely anonymous.*" The email also requested that people forward the announcement to their Bulgarian friends.

After the survey was posted on the Internet, respondents were asked to fill out the online questionnaire and return it by clicking the "SUBMIT" button on their screen. The code removed all identifying information and returned the answers to the researcher in an email form[1]. Samples of the individual responses are shown in Appendix B.

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[1] Theoretically, a person could fill out the survey numerous times. However, considering the nature of the survey and the time needed to complete it, this remains a highly unlikely possibility.

The study employed two statistical tests, Lambda and Kendall's tau-b[2], to address the research questions. The results of these tests are summarized below.

Results

The online survey generated a total of 74 responses: 37 from Bulgaria, 31 from the USA, 4 from Western Europe and 2 from people living in a country marked as "other." The four responses from Western Europe and the two from other countries were excluded from the analysis due to the small number of observations. Thus the total number of observations in the present study is 68.

It is interesting to note that the majority of the respondents filled out the Bulgarian language version of the questionnaire. The distribution of the responses received by date was highly skewed to the right. The majority of the surveys were returned (electronically) the day after the announcement was emailed.

Most of the respondents were male, nearly half (46 percent) were students and 33 percent were employees at public companies. About 47 percent of the respondents in the sample were between the ages of 19 and 25, while 44 percent fell in the category between 26 and 35 years old. In terms of education, 24 percent of the sample had a BA degree at the time the study was conducted (March 2000), and 15 percent had high school education only. The rest of the respondents reported completing at least some Master's work; the majority of the participants, in fact, had an MA degree.

The study measured a number of different variables for the Internet usage of each respondent in order to detect potential differences. The questionnaire focused on three types of usage in particular: duration and frequency of Internet usage for Bulgarian users, primary motivation for Internet use, and also types of services and sites visited on a regular basis.

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[2] According to Agresti and Finley, those tests are preferred to the Chi-square, for nominal and ordinal data respectively.

The comparison between the two populations of interest--Bulgarians living in Bulgaria (n=37) and Bulgarian living in the United States (n=31)--yielded substantial results. As Table 1 shows, there is no statistically significant difference between the two populations in the number of years the two groups of people have been using the Internet (p=0.065) and there is no difference (p=0.53) in the frequency of Internet use, on average (see Table 1). Most respondents said that they use the Internet at least once a day. Of the respondents living in Bulgaria, 38 percent said they have used the Internet for more than five years; 52 percent out of those living in the United States said they have used the Internet for so long as well.

The questionnaire also asked the following question: what best describes why do you use the Internet? The lambda coefficient indicates that there is no statistically significant difference (p=0.768) in the motivation Bulgarians in both locations have for using the Internet (Table 1). The main reason for both populations is to obtain information; notably, 52 of the total 68 respondents fall in this category (i.e. almost 77 percent of the participants). The second strongest primary motivation is to keep in touch with friends and family; about 13 percent of the respondents selected that answer. Finally, 9 percent of the respondents said they use the Internet for work-related purposes; only two percent checked entertainment as the primary reason for Internet use.

The Bulgarian online users in the two groups, however, differ across other variables. The results of the Kendall's tau-b test in Table 1 show that there is a difference in the number of hours Bulgarians in Bulgaria spend online, compared to those living in the United States (p=0.008). Most of the respondents living in Bulgaria spend less than two hours a week online compared to two to five hours for those living in the United States. Also, the two populations differ in the place where they connect to the global network (p=0.004). Most users living in Bulgaria indicate that they use the Internet primarily from work, while those users living in the United States have more variance between the categories home, school and work.

Another difference between the two groups of respondents is that Bulgarians living in the United States read Bulgarian online newspapers more often than Bulgarians living in Bulgaria. The results of the Kendall's tau-b test (Table 1) indicate that there is a statistically significant difference for frequency of readership (p=0.034). More than 16 percent of the Bulgarians living in the United States say they read Bulgarian online papers every day and about 29 percent say they do once a week. Finally, there is a difference in whether or not individuals visit additional news services for news on Bulgaria, other than Bulgarian online papers; the results show a slight significance (p=0.04).

The next section offers an interpretation of the results and discusses their implications for future research.

Discussion and Conclusions

The first research question inquired how Bulgarians living in the United States use the Internet differently than those living in the Republic of Bulgaria. The comparisons across several different variables show mixed results.

The two groups have similar Internet experiences when looking at how long people been using the Internet. Only four of the 68 respondents have started using the Internet in the past six months; all of those have indicated that they live in Bulgaria. Another four have been using the Net for less than two years (two of those were from the respondents living in Bulgaria and two from the USA). Most respondents in both geographic locations indicate they have used the

Internet for at least two years, with over 44 percent saying they have been on the Internet for more than five years. This finding refutes arguments that the Internet was not available in Bulgaria and by extension in Eastern Europe soon after its establishment as an open network for communication in the United States. Related to this finding, most respondents in both groups say that they use the Internet at least once a day. It may not be far-fetched to claim then that the Internet is becoming a significant component of the everyday lives of people on a global level and not only in the so-called industrialized world.

The questionnaire also asked the respondents what best describes the main reason why they use the Internet. Uses and gratifications theory says that people use the media because they perceive it as fulfilling a specific utility function on the individual level. The answers of the survey suggest that the most important motivation for Internet use of Bulgarians in both locations is obtaining information. In other words, the majority of the sample of Bulgarian users perceive the Internet as fulfilling information needs first and foremost. This finding suggests that the Internet as a source of information on various topics, available quickly and inexpensively, is a force to be reckoned with in the media world. The second strongest motivation for Internet use is to keep in touch with friends and family. About 14 percent of the respondents indicate this social function as the major reason why they connect to the Internet. This finding contradicts arguments that the Internet cannot fulfill interpersonal communication needs. It illustrates the social utility the Internet can serve, as the majority of the respondents claim that they use email on a regular basis. Third, nine percent of the people answered that they use the Internet primarily for work-related purposes. Very few said that they use the Internet primarily for entertainment.

The users in the two groups, however, differ in their Internet usage across several variables. Interestingly, there is a difference in the number of hours per week using the Internet. The results show that Bulgarians in Bulgaria spend less time online compared to those living in the United States. In fact, over 40 percent of those respondents spend less than two hours a week online. This finding is not so surprising, considering that connection to the Internet in Bulgaria is relatively expensive. Also, the two populations differ in the place where they connect to the global network. Most users living in Bulgaria indicate that they use the Internet primarily from work, which again is not surprising because, as the literature review showed, few people can afford to buy a personal computer. The results of this comparison, however, may have been biased as a result of the sample composition.

Another difference between the two groups of respondents is that more Bulgarians living in the United States read Bulgarian online newspapers than those living in Bulgaria. This finding is especially relevant to Bulgarian national media. Online newspapers can target this existing audience in the future and keep it "clicking back" on their websites with a good quality of information. Becker and Wehner (1998) argue that electronic media will not replace traditional media. The results of the study suggest, however, that there a niche for national online media and that such media can, in fact, serve the information needs of long-distance markets. This characteristic may be applicable to other clusters of national populations living abroad as well.

The second major research question proposed in the study was what are the discernible patterns of Internet usage for Bulgarian online users. In other words, can we describe who the typical Bulgarian Internet user is?

There has been much research in the United States to discover the "profile" of Internet users. A number of user studies conducted by the Georgia Tech GVU lab found that most Internet users in the United States are male, well-educated, and upper income (see Owen, 1999). Stewart et al. (1998) found in a study of American students that, in general, men are more willing to adopt a new technology than women. They also found that whites are more willing to adopt than other cultural groups in the United States. Lindstrom (1997) found similar characteristics for North American Internet users—that they are mostly male, upper class and well-educated. Lindstrom surveyed users in the United States and in Canada in two time periods. When replicating the study in 1996, he found that the typical user is changing and that the user base is broadening. Lindstrom argued that the "[n]ewcomers are significantly different from long-term users in terms of both make-up and behavior" (1997, 40). So it is logical to expect that later adopters of the Internet may have different characteristics and different types of uses as compared to early adopters, as is the case with other innovation diffusions (Rogers, 1995).

For the Bulgarian online community, the results show the following typology: most of the respondents that use the Internet are male (58 percent) and more than half of the respondents have a Master's degree or higher. The survey did not ask questions about income or social class. The majority of the sample of respondents in this study, however, resemble early American users identified in previous research in two respects: they are predominantly male and well-educated. It is important to note that the majority of the respondents, however, were students (46 percent). The generalizability of the findings can be questionable because of the limitations of the sampling method employed in this exploratory study.

A World Bank report on corporate use of Internet by companies in the developing world found that local companies have begun to utilize the Internet similarly to more industrialized countries (Daly & Miller, 1998). The report also found that information searches are a major use of the Net, and despite the often inefficient telephone network in the developing countries, Internet use is quite extensive. What the results of the present study reveal for the online users in Bulgaria is that they tend to use the Internet from work, possibly because to own a computer and to connect from home is relatively expensive for the average Bulgarian. This finding suggests that more capital investment and statewide programs are needed to bring Internet development in Bulgaria closer to Western standards. When describing the information sector in Hungary, Gulyas said that the modern information "superhighway" resembles more a "bumpy road" (1998, p. 89). This metaphor applies to Bulgaria as well. The results of the study, however, suggest that the "bumpy road" *is* in place and is being used frequently (especially at work) by a growing number of people living in Bulgaria. This promising finding suggests that Bulgaria and Eastern Europe are likely to exhibit further and faster Internet adoption in the near future.

The literature summarized above reveals that the Internet, undoubtedly, is changing at an unprecedented pace. New users join the World Wide Web every day. This creates a potential problem that faces any Internet study: results may become outdated soon (e.g., Arnum and Conti, 1998). Elie (1998) also discusses the lack of Internet statistics and the different approaches a researcher can take when examining Internet. General trends in Internet audience behavior and characteristics are worthwhile if not easy to follow.

Another problem with investigating Internet use is the Internet sampling method employed here. The initial contact list of potential respondents is not a random sample and may have represented a cross section of Bulgarian online users that differs from the rest of the population. Also, since there is no guaranteed way to know who participates in an Internet survey in general, the validity of the study results can be questionable. This undermines the generalizability of the data for the population groups. This issue results from the problem of "self-selection." The people who choose to participate in an Internet survey may be different from the respective population at large. However, as Ahmann argues (1998, p. 25), "at this point, self-selection methods have evolved as the only feasible way of obtaining a sample of Internet users."

In sum, traditional sampling techniques are simply not applicable to conducting online questionnaires. At the same time, online surveys are one of the few ways to reach the population of interest quickly and inexpensively However, the results of this exploratory study should be used with caution for the total population of Bulgarian online users.

When conducting Internet research, it is important to understand that anything dealing with the global "network of networks" becomes outdated soon. Limitations of Internet research in general and this study in particular have to be taken into account when trying to generalize results for the population at large.

The study found that populations of the same national origin living in two different countries both differ and resemble each other in their Internet usage. The user "profile" described above suggests that there is an existing long-distance information market that national/local media and advertisers can take advantage of. Travel agencies and long-distance phone companies, among others, may be interested in these online users. Larger and more systematic studies about individual use of Internet, however, are needed to capture the more detailed characteristics of this market.

Gulyas (1998) said that the former Soviet bloc countries have two choices: to simply follow the steps of the West in the global information revolution or to take advantage of their late start and go to the frontline. This exploratory study of Internet use of Bulgarians suggests that that ambitious goal can be reached--with improvement of economic conditions in the country and establishment of programs to accelerate development of the information sector of the Bulgarian economy.

Table 1. Comparisons for Internet Use variables

Variable	Bulgaria (%)	USA (%)	Correlation	Probability
Duration of Internet use			**Kendall's tau-b=0.198**	**0.065**
less than 3 years	35.2	13.0		
more than 3 years	64.8	87.0		
Frequency of Internet use			**Kendall's tau-b=0.074**	**0.530**
once a week	2.7	0.0		
several times a week	18.9	16.1		
at least once a day	78.4	83.9		
Hours a week spent online			**Kendall's tau-b=0.279**	**0.008**
less than 2 hours	40.6	0.0		
2-5 hours	27.0	54.8		
6-10 hours	10.8	19.4		
over 10 hours	21.6	25.8		
Location			**Lambda= 0.333**	**0.004**
cyber cafe	8.1	0.0		
home	16.2	19.4		
work	64.9	16.1		
library	0.0	6.4		
school	10.8	58.1		
Uses			**Lambda= 0.03**	**0.768**
information utility	75.7	77.4		
social utility	10.8	16.1		
other	13.5	6.5		
Read Bulgarian online newspapers			**Kendall's tau-b=0.219**	**0.034**
once a day	2.7	16.1		
several times a week	21.6	19.4		
once a week	5.4	29.0		
once a month	10.8	3.3		
rarely	21.6	29.0		
no	37.9	3.2		
N=68	(37)	(31)		

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Appendix A

Questionnaire

Please select the best answer for each question:

1. Where do you live at the moment?
in Bulgaria
in the USA
Western Europe
other

2. How long have you been using the Internet?
more than 5 years
between 3-5 years
about 2 years
1-2
less than six months

3. How often do you use the Internet?
at least once a day
a few times a week
once a week
once a month

4. How many hours a week, on average, do you spend online?
0-2
2-5
6-10
more than 10 hours

5. Do you use the Internet mostly from
home
work
school
library
internet café
other

6. What best describes why you use the Internet?
to obtain information
to keep in touch with friends and family
for entertainment
for excitement
to pass time
to escape from reality
to get work related information

7. Which of these do you use on a regular basis? (please select all that apply)
email
World Wide Web
chat rooms
newsgroup mailing lists/ listserves
search engines (e.g. Yahoo)

8. Which of these sites do you visit on a regular basis? (please select all that apply)
news sites

travel information sites
sports sites
adult sites
sites to get music
sites for shopping
sites for gambling
libraries

9. Do you read Bulgarian newspapers online?
no
at least once a day
a few times a week
once a week
once a month
very rarely

10. Do you use other news services for news about Bulgaria?
yes, mostly Bulgarian
yes, mostly foreign sources
no

11. Do you own a computer?
yes
no

12. Do you have a personal website?
yes
no

13. Age
under 18
18 - 25
26- 35
36 – 45
46 and over

14. What is your highest education?
high school
college (BA or lower)
college (some Masters)
Masters Degree
Ph.D.

15. Gender
male
female

16. Occupation
student
academic
public company employee
private company employee
other

17. How did you hear about this survey?
....

Appendix B

Samples of responses

Date: Mon, 6 Mar 2000 22:28:50 -0500 (EST)
From: WebMonitor mail <danielad@grove.ufl.edu>
Subject: FORM results

(location) USA
(how long) more than 5 years
(how often) once a day
(often) 2-5 hours a week
(where) school
(uses) for information
(e-mail) on
(World-Wide-Web) on
(newsgroups) on
(search engines) on
(sites for) news, travel info, shopping
(read BG papers) once a month
(read_news_BG) yes-Bulgarian
(PC) no
(webpage) yes
(age) 18-25
(edu) College
(gender) male
(job) student
(referred by) friend

Date: Mon, 6 Mar 2000 22:15:32 -0500 (EST)
From: WebMonitor mail <danielad@grove.ufl.edu>
Subject: FORM results

(location) USA
(how long) more than 5 years
(how often) once a day
(often) 6-10 hours a week
(where) home
(uses) for information
(e-mail) on
(World-Wide-Web) on
(sites for) news, travel info
(read BG papers) once a week
(read news on BG)yes, Bulgarian
(PC) yes
(webpage) yes
(age) 26-35
(edu) Master's
(gender) female
(job) student
(referred by) from a friend

Date: Mon, 6 Mar 2000 23:51:02 -0500 (EST)
From: WebMonitor mail <danielad@grove.ufl.edu>
Subject: FORM results

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```
(location) Bulgaria
(how long) less than 6 months
(how often) several times a week
(often) 0-2 hours a week
(where) work
(uses) for entertainment
(e-mail) on
(World-Wide-Web) on
(chat rooms) on
(newsgroups) on
(sites for) news, adult material, music
(read BG papers) not often
(read_news_on_BG) no
(PC) no
(webpage) no
(age) 26-35
(edu) College
(gender) male
(job) at public company
(referred by) email

Date: Wed, 8 Mar 2000 12:30:39 -0500 (EST)
From: WebMonitor mail <danielad@grove.ufl.edu>
Subject: FORM results

(location) USA
(how long) 3-5 years
(how often) once a day
(often) 0-2 hours a week
(where) school
(uses) social-stay in touch
(e-mail) on
(World-Wide-Web) on
(sites for) news, music, libraries
(read BG papers) not often
(other sources) no
(PC) no
(webpage) female
(age) 18-25
(edu) high school
(gender) female
(job) student
(referred by) e-mail
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What Is Interactivity and What Does It Do?

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ABSTRACT

What Is Interactivity and What Does It Do?

Interactivity has been defined as both process and perception. This study operationalizes measures of interactive processes based on the interactive features at Web sites. Measures of interactive perceptions are operationalized based on individuals' perceptions of interactivity at those same sites. Relatively few significant relationships were found between processes and perceptions. However, perception of interactivity seems somewhat stronger than interactive processes as a tool for explaining both attitude toward Web sites and future site-related behaviors.

INTRODUCTION

Interactivity. It makes the World Wide Web and other forms of computer-mediated communication innovative. But what is it? Researchers have begun the process of explicating the concept (Kiousis 1999). Journalists use the term to refer to technologies ranging from CD-ROM to virtual reality (McMillan 1999b). But questions remain. This study examines interactivity from two primary perspectives: interactive processes (or features) and individual perceptions of interactivity. These two ways of looking at interactivity may help answer questions about what interactivity is and what impacts it has on attitudes and behaviors.

Answers to these questions are important to both communication practitioners and communication scholars. Interactive media forms are growing exponentially. The Internet Software Consortium (1999) reported that about 1.3 million Internet hosts existed in January of 1993. By July of 1999, more than 56.2 million hosts were found. Communication practitioners who create content at these sites must understand not only how to keep up with the growth but also how to adapt their communication style to new media forms. Communication researchers need to understand the impacts that interactive communication has on these new media forms so that they can appropriately conduct research and build theory that address those impacts.

LITERATURE REVIEW

Following is a brief review of literature addressing the questions posed in the title of this study. First, the question "What is Interactivity?" is explored through literature that has defined both interactive processes and perceptions of interactivity. Second the question "What Does It Do?" is explored through literature related to relationships between interactivity and familiarity with a Web site, attitude toward the site, and behaviors related to the site. Finally, the literature provides background on the resources required for creating interactive communication.

Interactive Processes

Some of the earliest work on interactivity was done by Rafaeli (1988, p. 11) who defined interactivity as: "An expression of the extent that, in a given series of communication exchanges, any third (or later) transmission (or message) is related to the degree to which previous exchanges referred to even earlier transmissions." Rafaeli also conducted a number of studies (see for example Rafaeli, 1990; Rafaeli and Sudweeks, 1997) in which he examined interactivity as a process-related variable based on relatedness of sequential messages.

Heeter (1989) suggested interactivity was a multi-dimensional concept based in the functions of the medium. She suggested that interactivity resided in the processes, or features, of a communication medium. Massey and Levy (1999) operationalized Heeter's conceptual definition and examined Web sites for interactivity based on presence of functional features such as e-mail links, feedback forms, and chat rooms. McMillan (1998) also used Heeter's conceptual definition of interactivity to identify features of Web sites that may be considered interactive. Her feature list also included many of those identified by Massey and Levy as well as bulletin boards, search engines, hit counters and publication dates. Ha and James (1998) identified additional interactive features including curiosity-arousal devices, games, user choice, registration forms, surveys, order forms, and toll free numbers.

Perceptions of Interactivity

Morrison (1998) suggested studies of interactivity should focus on the user's perspective. Newhagen (1998) noted "traditional concepts of audience have little descriptive power in the context of the Internet. Rather, the individual user comes to conceptual center stage." While capacity for two-way communication and other technical aspects of a medium may facilitate interactivity, the uses individuals make of media may better explain the interactive process.

Williams, Stover, and Grant (1994) suggested that although media technologies change rapidly, understanding individuals' uses of those media is a key step in the theory-building process. McMillan (2000a) found that interactivity seems to reside primarily in the perceptions of media uses. Wu (1999) also focused on the need to study interactivity from the perspective of perceptions of those who use interactive media.

McMillan (1999a) developed and tested a scale for measuring perceptions of interactivity. This scale is based on dimensions of interactivity that emerged from qualitative research of individuals' perception of interactivity (Downes and McMillan, 2000). Scale items include measures for perceptions of how well the site facilitates two-way communication, of how much control individuals have when visiting the site, and how active the visitor must be to fully experience the site. Another measure of perceived interactivity is how well the site facilitates the time demands of visitors. In other words, how easy is it for visitors to communicate at times that are convenient for them? Finally, the scale includes a measure for how well the site creates a sense of "place" in cyberspace. This scale was successfully used in a study (McMillan 2000a) that examined relationships between perceived interactivity and site characteristics.

Process vs. Perceptions

The first research question examines relationships between perceptions of interactivity and interactive processes identified in the literature above.

RQ1 What is the relationship between the perceived interactivity of a Web site and the interactive features of that site?

Interactivity and Familiarity

Both Oginanova (1998) and McMillan (1999a, 2000a) found some evidence that individuals' familiarity with the content of a Web site might impact on their perceptions of interactivity at that site. Different amounts of time that an individual has spent with a site could provide a measure of familiarity that might help distinguish among different types of site visitors. Thus, the second research question examines relationships between familiarity with sites and perceptions of interactivity.

RQ2 How does perceived interactivity of a Web site vary based on level of familiarity with that Web site?

Interactivity, Attitude, and Behavior

Wu (1999) found a positive relationship between attitudes toward the Web site and perceived interactivity of the Web site. He argued that attitude toward the Web site is a critical measure of effectiveness that needs further exploration. Oginanova (1998) adapted attitude toward the ad scales for use in measuring attitude toward a Web site. McMillan (2000a) used that scale in a study that directly compared perceptions of interactivity and interactive processes in Web sites. She found that perceptions of interactivity were much more likely than interactive processes to be related to attitude toward the site. She also found that positive attitudes seemed to be a precursor of possible future actions that individuals might take related to the site (e.g. telling others about the site, purchasing items offered through the site, etc.). Two research questions examine relationships between interactivity and both attitudes and behaviors.

RQ3 What is the relationship between attitude toward a Web site and both individual perceptions of interactivity and interactive features at that site?

RQ4 What is the relationship between anticipated behaviors related to a Web site and both individual perceptions of interactivity and interactive features at that site?

Interactive Sites and the Organizations That Create Them

As Lyle and McLeod (1993) pointed out, introducing new technologies of communication can often be a costly proposition. Street and Rimal (1997) noted that developing interactive technologies for delivering health-related information is more expensive than traditional media such as brochures and video, but less expensive than the one-on-one conversations which interactive technologies can often emulate.

Schwartz (1999) suggested the Web is still in an early stage of evolution and only organizations that learn to adapt to this new interactive environment will survive. Thus, the final two research questions examine relationships between interactivity at Web sites, the resources available for creating and maintaining the sites, and the organizations that create them.

RQ5 What is the relationship between the resources available to an organization for creating and maintaining a Web site and both individual perceptions of interactivity and interactive features at that site?

RQ6 What is the relationship between the type of organization that created a Web site and both individual perceptions of interactivity and interactive features at that site?

METHOD

A sample of health-related Web sites was used for examining the research questions posed above. These sites were part of a larger sample of sites randomly selected from the Yahoo directory of health-related Web sites in January of 1997 (McMillan 1998). The sites analyzed in the current study were still operating three years later in January of 2000. Thus, they represent sites that have survived a turbulent growth period in the history of the Web (McMillan 2000b).

Three forms of analysis were used to examine the research questions posed above. First, a survey of Web site managers was used to gather information about the organizations that create Web sites, the resources available to them for creating and maintaining those sites, and managers' perceptions of interactivity at their sites. The survey was sent via e-mail to all of the 287 Web sites that had survived the three years from 1997 to 2000 (72.7 percent of the original 395 sites). The survey was successfully delivered to 273 of those sites (approximately 5 percent of the e-mail addresses were no longer functioning and no new e-mail address could be found). A total of 110 completed surveys were returned resulting in a response rate of 40.3 percent.

Second, content analysis was used to identify interactive features of Web sites. All 110 of the sites for which a survey had been returned were downloaded from the Web in January 2000. Four trained coders used those downloaded sites to search for and code the presence of structural characteristics of Web sites that had been defined as interactive in the literature (see the Interactive Features section of Table 1 for a list of those features). Using Holti's (1969) formula, intercoder reliability of 96.1 percent was achieved for these measures. Discrepancies were due to omissions or oversights and were easily resolved. Additionally, trained coders were instructed to use scales to indicate their perceptions of interactivity at the sites and their personal attitude toward the sites.

The third and final form of analysis involved 11 untrained coders. Each of these coders was asked to simply spend about 10 minutes "surfing" the Web sites. They were not given any instructions of what to look for or how to review the site. After this quick overview, they used scales to rate perceived interactivity and attitude toward the Web site.

Table 1 provides an overview of how each of the variables identified in the research questions was operationalized. The table also indicates which data collection tool(s) were used for collecting the information related to each variable.

Three of the measures identified in Table 1 used scales drawn from the literature: perceived interactivity, attitude toward the Web site, and anticipated behavior. Reliability of these scales was tested using Cronbach's alpha. Separate scales were calculated for perceived interactivity for each of three groups: site managers (alpha = .81), trained coders (alpha = .92), and untrained coders (alpha = .64). Separate attitude toward the Web site scales were calculated for two groups: trained coders (alpha = .94) and untrained coders (alpha = .93). Finally, only the untrained coders were asked to respond to anticipated behavior scale items (alpha = .93).

Table 1. Operationalizing Variables

Concept	Measures	Data Collection Tool (s)
Perceived interactivity	7-point agreement scale from 1=strongly disagree to 7=strongly agree Site: Is interactive Allows two-way communication Gives visitors control Requires user activity Creates a sense of "place" Is sensitive to time needs of users Source McMillan (1999a and 2000a)	Site-manager survey Trained-coder evaluation Untrained-coder evaluation
Interactive features	Site includes: E-mail link Toll free number Registration form Survey/comment form Order/purchase form Bulletin board (asynchronous) Chat room (synchronous) Search engine Viewer choice (e.g. language) Curiosity devices (e.g. Q&A) Games Hit counter Publication date Sources Ha and James (1998), Massey and Levy (1999), McMillan (1998)	Content analysis
Familiarity with a Web site	Three levels: Site managers = high Trained coders = moderate Untrained coders = low	NA

Table 1. Operationalizing Variables, Continued

Concept	Measures	Data Collection Tool (s)
Attitude toward the Web site	7-point semantic differential scale Site is: Good/Bad Pleasant/Unpleasant Not irritating/Irritating Interesting/Not Interesting Like/Dislike Sources McMillan (2000a), Oginanova (1998), Phelps and Thorson (1991), Putrevu and Lord (1994), Thorson and Coyle (1994).	Trained-coder evaluation Untrained-coder evaluation
Anticipated behavior	7-point likelihood scale from 1=very unlikely to 7=very likely Return to the site Tell others about site Send e-mail to site Bookmark site Post message about site to newsgroup Purchase from site (if applicable)	Untrained-coder evaluation
Organizational type	Six organizational types identified: For-profit Non-profit Government Education Individual Other Source McMillan (1998)	Site-manager survey

FINDINGS

Process vs. Perceptions

The first research question asked: What is the relationship between the perceived interactivity of a Web site and the interactive features of that site?

The left column of Table 2 lists each interactive feature and indicates the percentage of sites in which each feature was found. In the remaining three columns of Table 2, mean scores on the perceived interactivity scale are reported for each of the three groups who analyzed the sites (managers, trained coders, and untrained coders). Two means are show for each group. The first mean (designated "yes" in Table 2) is for sites that HAD the feature. The second mean (designated "no") is for sites that did NOT have the feature. These sets of means were compared for each of the three groups using ANOVA.

Table 2. Interactive Features and Perceived Interactivity

Feature (percentage of sites where found)	Site Manager Perceptions (yes/no)	Trained Coder Perceptions (yes/no)	Untrained Coder Perceptions (yes/no)
E-mail link (89.7%)	4.66/4.59	3.27/2.41	4.19/4.15
Publication date (52.3%)	4.54/4.78	3.33/3.04	4.19/4.18
Search engine (44.9%)	4.99/4.38**	3.90/2.61***	4.21/4.16
Hit counter (34.6%)	4.48/4.74	3.36/3.10	4.00/4.28
Toll free number (29.9%)	4.83/4.58	3.37/3.11	4.15/4.19
Viewer choice (25.2%)	4.49/4.71	3.27/3.16	4.10/4.21
Registration form (25.2%)	4.87/4.58	3.79/2.98**	4.07/4.22
Curiosity devices (24.3%)	4.90/4.57	3.94/2.95**	4.01/4.24
Survey/comment form (21.5%)	4.87/4.60	3.27/3.17	4.23/4.17
Bulletin board (15.9%)	5.53/4.48***	3.89/3.05*	4.31/4.16
Order/purchase form (15.0%)	5.16/4.57	3.57/3.12	4.25/4.17
Chat room (10.3%)	5.05/4.61	4.64/3.02***	4.02/4.20
Games (.02%)	5.83/4.63	2.58/3.20	3.92/4.19

* p < .05, ** p < .01, *** p < .001

The most interesting finding in Table 2 may be the large number of interactive features that have no impact on perceptions of interactivity. Among untrained coders, none of these interactive features had any significant impact on perceived interactivity of sites. Among site managers, only the presence of search engines and bulletin boards (for asynchronous two-way communication) led to perceptions of greater interactivity. Among trained coders, more significant relationships were found. The presence of search engines, registration forms, curiosity devices (such as Q&A formats), bulletin boards, and chat rooms (for synchronous two-way communication), all led to higher perceptions of interactivity.

While relatively few relationships were found between specific interactive features and perceptions of interactivity, the interactive features may have a kind of cumulative effective. To test this idea, interactive features found at sites were totaled to create a new variable. Possible values for this new variable ranged from 0-13. On average, sites had 3.93 interactive features. The total features variable was correlated with perceived interactivity scales for each of the three groups who analyzed sites. Findings were consistent with Table 2. No significant relationship ($r = -.07$, $p = .495$) was found between total features and perceived interactivity among untrained coders. A strong correlation between the total number of features and perceived interactivity was found among trained coders ($r = .40$, $p <.001$), and a weaker correlation between total features and perceived interactivity was found among site managers ($r = .19$, $p < .05$).

Finally, the program used for downloading the Web sites created a site map. This was used to count the number of links (both internal and external) at the site. The number of links provides a proxy for overall complexity of the site. Coders counted total links and also counted external links. On average, sites had a total of 138 links of which 71 were external. Total number of links was positively correlated with the total number of interactive features at a site ($r = .23$, $p <.01$). This suggests that sites with more links also had more interactive features. However, these larger more feature-rich sites were not necessarily perceived as more interactive. Correlations between perceived interactivity and both the total number of links ($r = .31$, $p < .01$)

and the total number of external links (r = .25, p < .01) were significant only among the trained coders. No significant relationships were found between perceptions of interactivity and site complexity (as measured by links) either among site managers or untrained coders.

Interactivity and Familiarity

The second research question asked: How does perceived interactivity of a Web site vary based on level of familiarity with that Web site? As noted in the method section, three forms of analysis were conducted for each of 110 Web sites. In each of those analyses, an individual was asked to indicate how interactive he/she believed a specific Web site to be. Interactivity scales were completed by site managers, trained coders, and untrained coders. T-tests comparing mean scores on these scales addresses research question 2. Site managers were most familiar with the site because they are responsible for creating and maintaining it. The trained coders had a moderate level of familiarity because they examined the site in detail (a process which could require as much as 30-45 minutes per site) as part of a content analysis project. The untrained coders had the lowest level of familiarity as they were simply asked to spend about 10 minutes "surfing" each site before evaluating it.

As illustrated in Table 3, significant differences in perceived interactivity were found based on level of familiarity with the site. All differences were significant at p < .001. Site managers consistently ranked the interactivity of their sites higher than did the other two groups. The trained coders gave sites the lowest interactivity scores. These coders had been trained to look for specific interactive features as part of the content analysis. This activity may have influenced the way that they perceived interactivity.

Table 3. Familiarity with the Site and Perceived Interactivity

Group	Mean Interactivity (scale 1-7)	Std Dev
Site Managers (high familiarity)	4.65	1.30
Untrained coders (low familiarity)	4.17	1.02
Trained coders (moderate familiarity)	3.19	1.56

Interactivity and Attitudes and Behaviors

Research question 3 asked: What is the relationship between attitude toward a Web site and both individual perceptions of interactivity and interactive features at that site? Both trained and untrained coders were asked to use a set of scale items to report their attitude toward the site. On average, trained coders had a more positive attitude toward the sites than untrained coders. The mean score on the seven-point attitude scale was 4.60 for trained coders and 4.39 for untrained coders. Difference between these two means is significant ($t = 34.17$, $p < .001$).

As illustrated in Table 4, correlation revealed some significant relationships between attitude toward the site and both perceived interactivity and interactive features. Relationships between attitude toward the site and interactivity tended to be strongest among trained coders – particularly when interactivity was measured as a as a perception (individuals' perceptions of interactivity) rather than as a process (interactive features).

Table 4. Attitude and Interactivity

	Trained Coder Attitudes	Untrained Coder Attitudes
Perceived Interactivity	.69***	.40***
Total Interactive Features	.42***	.00

*** p < .001

Research question 4 asked: What is the relationship between anticipated behaviors related to a Web site and both individual perceptions of interactivity and interactive features at that site?

The untrained coders were asked to rate the likelihood that they would take specific actions related to a Web site.[1] Possible future behaviors were correlated with both perceived interactivity and interactive features. As illustrated in Table 5, scores on all of the behavioral intention items were quite low (means are on a 7-point scale for which higher scores indicate greater likelihood of taking action). The average likelihood of taking any action (on a combined scale of all activities) was only 1.77. The highest single-item score was only 2.31. The only significant relationship was a positive correlation between perception of interactivity and intention to tell others about the site.

Table 5. Possible Future Actions and Interactivity

Action (mean on 7-point likelihood scale)	Correlation with Untrained Coder Perceptions of Interactivity	Correlation with Interactive Features of the Site
Return to the site (1.97)	.11	.10
Tell others about site (2.31)	.30***	-.00
Send e-mail to site (1.57)	.05	.09
Bookmark site (1.55)	.03	.09
Post message about site to newsgroup (1.63)	.15	.11
Purchase from site (1.43)	.13	.21
Any action (1.77)	.15	.08

*** $p < .001$

Interactive Sites and the Organizations that Create Them

Research question 5 asked: What is the relationship between the resources available to an organization for creating and maintaining a Web site and both individual perceptions of interactivity and interactive features at that site? In the e-mail survey, respondents were asked to provide information about the total annual cost for maintaining the content of the site, the number of people who work on the site, and weekly number of site visitors. Each of these variables was correlated with both perceptions of interactivity and interactive features at a site.

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[1] While the input of trained coders would have also been relevant to these questions, the researcher chose not to ask those individuals to code behavioral items. Instead, the time of trained coders was used on the more demanding task of analyzing the content for interactive features.

As illustrated in Table 6, the only significant relationship was between the site managers' perceptions of interactivity and the number of people who worked on the site. The more people worked on the site, the more managers believed that the site was interactive. However, no significant relationship was found between the number of people working at the site and actual interactive features at the site.

Table 6 Resources Available and Interactivity

Resource (mean)	Site Manager Perceptions	Trained Coder Perceptions	Untrained Coder Perceptions	Interactive Features
Total annual cost for content ($9,917)	.13	.07	-.09	.15
Number of people working on site (3.29)	.20*	.08	-.13	.01
Weekly number of site visitors (11,825)	.09	-.22	.07	-.06

* p < .05

Research question 6 asked: What is the relationship between the type of organization that created a Web site and both individual perceptions of interactivity and interactive features at that site? In the e-mail survey, site managers identified the organizational type that best defined the organization responsible for creating and maintaining the site. As shown in Table 7, ANOVA was used to examine how organizational types might differ both in terms of perceived interactivity and interactive features.

Table 7. Organizational Type and Interactivity

Organizational Type (N)	Site Manager Perceptions	Trained Coder Perceptions	Untrained Coder Perceptions	Interactive Features
For-Profit (24)	4.21	2.66	3.82	3.86
Non-Profit (19)	4.76	3.18	4.71	4.00
Government (6)	5.39	2.64	3.89	3.83
Education (31)	4.56	3.45	3.91	4.23
Individual (24)	4.99	3.70	4.28	3.37
Other (5)	4.26	2.63	4.83	5.00
Total (109)	4.65	3.21	4.16	3.93
ANOVA	F = 1.43	F = 1.48	F = 2.84**	F= .78

** $p < .01$

The only significant relationship related to organizational type was perception of interactivity among untrained coders. Among this group, it is interesting to note that non-profit organizations received one of the highest perceived interactivity scores while for-profit organizations scored lowest.

SUMMARY AND DISCUSSION

What is Interactivity?

This study identified reliable measures for interactivity, but despite the promise of these measures, the concept of interactivity remains elusive. Few significant relationships were found between the presence of interactive features and perceived interactivity. This suggests that the link between perceived interactivity and interactive processes may be relatively weak.

Lack of significant relationships between features and perceptions may also indicate the need for refinement of both measures. However, it should be noted that the interactive features grow out of the literature and seem to reflect generally accepted notions of what features make a site more "interactive." The scale for perceived interactivity also grew out of the literature and has face validity. It includes the item: "this site is interactive" and reliability testing indicates that scale items "hold together" well.

The interactive features that seem to have the strongest relationship with perceived interactivity were bulletin boards and search engines. Bulletin boards provide a mechanism for two-way communication. Search engines give site visitors control over their visiting experience. Thus, these findings suggest that two-way communication and control are key elements of interactivity. This finding is consistent with earlier research on perceptions of interactivity (McMillan 1999a).

This study also suggests that interactivity might be a "learned" concept. Coders who were most likely to perceive interactivity as being associated with interactive features were those who had been trained to look for those features. These were also the only coders to perceive greater interactivity at more complex sites. Coders who had the least experience with the sites did not make any significant connections between perceived interactivity and either interactive features or complexity of Web sites.

But greater sensitivity to relationships between interactive features and perceived interactivity does not translate to higher scores on the perceived interactivity scale. Instead, it was site managers who scored sites highest on the perceived interactivity scale. Trained coders gave sites the lowest scores on the perceived interactivity scale. This may suggest that site managers have experienced some new forms of communication through their sites that they perceive to be interactive but which are not easily captured with a list of interactive features. Qualitative research needs do be done to determine why site managers believe their sites to be interactive even when they have few interactive features.

What Does It Do?

Interactivity does have some effects. Interactive features are less likely than perceptions of interactivity to be correlated with attitude toward the site or possible future behaviors. Correlation between interactive features and attitude toward the site was found only among trained coders. No correlation was found between interactive features of a site and possible future behaviors related to the site.

Perceived interactivity seems to hold promise for predicting both attitude and behavior. Significant positive correlations were found between attitude toward the Web site and perceptions of interactivity. This relationship was strong for both trained and untrained coders. However, this study was not designed to test causation for this correlation. On the one hand, it is possible that sites that are perceived as more interactive are regarded highly and thus receive high scores on the attitude scale. On the other hand, it is possible that other factors (e.g. Web site design, subject matter of the site, etc.) lead to positive attitudes toward the site which in turn leads to higher scores on the perceived interactivity scale.

But does attitude translate into behavior? This study would suggest that individuals are relatively unlikely to take future actions after visiting these sites. The average score on a seven-point likelihood-of-action scale was only 1.77 indicating that respondents are unlikely or very unlikely to take specific actions. This may be related to the fact that all of the sites examined in this study were related to health topics and all of the students who evaluated the sites were healthy young people who saw little relevance of the sites to their lives. Only telling others about the site scored above 2 on this scale. Furthermore only one significant relationship was found between action and interactivity. Higher scores on the perception of interactivity scale were positively correlated with likelihood of telling others about the site.

Few relationships were found between interactivity and either organizational resources or organization types. Site managers who had more people working on their sites believed their sites to be more interactive. But no significant relationship was found between number of people working a site and interactive features. This may suggest that the additional staff members are not building more "bells and whistles" at their sites but rather are doing a better job of using the basic site features to be more responsive to site visitors. Untrained coders may have also perceived a greater willingness to engage with visitors among non-profit organizations thus resulting in the higher perceived interactivity scores reported in Table 7.

Sampling Suggestions

This study is based on a sample of 110 health-related Web sites. These sites provide an interesting venue for analysis of Web sites for four reasons. First, health-related topics have played a central role in media development (See for example Jones 1996 and Barnouw 1966). Second, health-related sites have long been one of the fastest growth areas on the Web (Fisher, 1996). Third, health-related sites are used heavily (Pingree, et al. 1996). Finally, these particular sites have survived for three years or more (McMillan 2000b). This assures that they are not mere novelty sites that will disappear quickly. However, it also means that they may not be representative of contemporary sites.

Future studies should sample from a current list of Web sites. Additionally, future studies should sample sites outside of the health category. This may provide a greater variety of sites and thus generate a larger number of sites that have higher scores on measures of perceived interactivity, interactive features, attitude toward the site, and likelihood of future behaviors.

Sites that have been developed recently may make more use of the interactive features. They may be less reliant on old site structures that were developed in a time when it was difficult to add features such as chat rooms and games to sites. Sites focusing on issues of more relevance to evaluators might also generate more positive attitudes and behavioral intentions.

Implications

Despite the limitations noted above, this study has some clear implications for communication practitioners. First, there is evidence of a correlation between attitude toward a Web site and perceived interactivity at that site. Thus, interactivity is an important factor for site developers to consider as they create and maintain Web sites. But simply adding features will not necessarily lead site visitors to perceive sites as interactive. Site managers need to use research to learn more about their visitors so that they can determine what factors will lead those specific individuals to believe that the site is interactive. However, if managers want to quickly add interactivity to sites, bulletin boards and search engines are the two features that are most likely to make the site seem interactive to visitors.

Additionally, managers should not trust their own judgment about the level of interactivity at their sties. This study showed that managers are more likely to believe that their sites are interactive than are visitors to their sites. This further emphasizes the need for research that will help site managers understand their visitors.

Despite the low scores on measures of future site-related actions, this study does provide some insight for managers who want to keep visitors involved with their sites. Word of mouth is clearly important. Site visitors are more likely to tell others about the site than they are to consider any other potential future action. Thus it is important for managers to identify ways to stimulate word of mouth and encourage visitors to talk about the site.

Finally, this study offers reassurance that the Web is still open to many different kinds of voices. Non-profit organizations have equal (or in some cases better) opportunities than do for-profit organizations to build sites that are perceived to be interactive. Similarly technological barriers seem to be relatively low. Sites created by individuals have no fewer interactive features than do those created by organizations. And no relationship was found between cost of developing content for a site and any measure of interactivity.

This study also has implications for communication researchers. Despite the limitations noted earlier, measures of interactivity seem to be stabilizing. Interactive processes, as defined by features identified in the literature, were easy to identify in Web sites. Coders were able to achieve a high degree of reliability in coding these features. Perception of interactivity, as defined by McMillan's (1999a) scale, also seems to be a reliable measure. These measures can be used as variables in multiple types of studies that seek to understand evolving media forms.

Additionally, this study provides a starting point for analysis of social, organizational, and personal implications of interactive media. At the social level, this study suggests that interactive communication is not limited to the elite. Individuals, non-profit organizations, educational institutions, government agencies, and for-profit organizations seem to have an equal opportunity to develop interactive sites that may host public discourse.

At the organizational level, developing interactive communication does not have to be a high-cost proposition. Furthermore, sites that attract small, specialized audiences are on equal footing with sites that draw large audiences in terms of both perceptions of interactivity and interactive features at their sites. These facts may shape future studies related to media management and media economics.

At the individual level, there is evidence that educated consumers are better able to develop informed attitudes based on both explicit and implicit characteristics of sites. This suggests that media literacy programs include interactive media.

In conclusion, the concept of interactivity is still evolving, but reliable measures are emerging that can help trace that evolution. Interactivity can be measured both as a perception and as a process. However, individuals' perceptions of interactivity seem to hold the most promise for understanding both attitude toward Web sites and future site-related behaviors.

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INFORMATION SOURCE USE AND DEPENDENCIES FOR INVESTMENT DECISION-MAKING

by

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INFORMATION SOURCE USE AND DEPENDENCIES FOR INVESTMENT DECISION-MAKING

ABSTRACT

This study explores the patterns of information source use of three types of investors: traditional, on-line, and mixed. Testing the uses and gratifications leading to dependency hypothesis, investors' information seeking behaviors and their dependence on 11 information sources with respect to perceived market uncertainty were examined. The results failed to support the hypothesis that on-line investors are more uncertain about the investing environment. However, it was found that the higher an investor's uncertainty level, the higher the level of his/her media exposure, functional alternative use, and on-line information source use. The three investor groups did not differ in their use of traditional and interpersonal investment information sources, but on-line investors' use of on-line sources was significantly heavier than that of traditional investors. The more frequent use of on-line sources also tended to intensify investors' dependence on them.

INFORMATION SOURCE USE AND DEPENDENCIES FOR INVESTMENT DECISION-MAKING

In the past decade, the Internet has been regarded as a place of utmost importance not only for organizations marketing and selling products as well as services, but also for customers getting information and buying commodities. With the growing market acceptance for Internet services and the flourish financial information are offered in different web sites, cyberspace investing has been booming since 1996. Thall, former president of the Marshall McLuhan Center for Global Communications, supports this contention by saying that,

> "the Internet is changing the world because it is changing the identity of everybody, all at once, at the same time. That may be a bit exaggerated in the larger world, but it certainly applies to anyone who has been in the business of supplying financial information, providing investment tools or executing securities transactions" (Carey, 1996: 56).

In fact, though cyberspace brokering has been available since 1992, the scope of services has only been well developed since 1995. Whereas on-line trading might only be regarded as the process of on-line buying and selling of securities in the past, the dimensions of present cyberspace investing includes supplying financial information, providing investment tools and executing both securities and mutual funds transactions on-line. According to David Atlas, a senior analyst for International Data Corporation, a computer industry research firm, some 50,000 to 100,000 people used their personal computers to trade stocks in 1990 (Dreyfuss, 1990). The number seems to be growing exponentially. According to consulting firm Forrester Research[1] in Cambridge, the number of on-line accounts[2] increased to 2.9 million in 1997 (InvestorGuide, 1997). Similarly the President & CEO of National Investor Relations Institute, Louis M. Thompson, Jr., reports that there were 7.5 million on-line trading accounts with total assets of $420 billion by the first quarter of 1999. On-line traders control as much as 50% of trading volume in the Internet stocks (Thompson, 1999). This was echoed by an update from Securities and Exchange Commission Chairman Arthur Levitt that on-line brokerage firms have accounted for approximately 25% of all retail stock trades by the beginning of 1999. The number of on-line brokerage accounts was expected to exceed 10 million by the end of that year (SEC, 1999).

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[1] Forrester is an independent research firm that helps companies assess the effects of technology change on business, consumers, and society. Its web site is http://www.forrrester.com.

Statement of the Problem

With the rapid growth of web trading, one wonders if the mass media habits and communication behaviors of on-line investors differ from "traditional" investors. For example, in the past, traditional brokers were considered to be opinion leaders who provided many kinds of information used by investors to trade. Investors had to execute their trades through their brokers. Nowadays, cyberspace investors can do this by themselves through the Internet, bypassing human brokers in a radically altered pattern of investing. No longer dependent on brokers, cyberspace investors have to make their own financial research and investment decisions. As such, one can hypothesize that there may be concurrent changes in their information seeking and information gathering strategies. In this sense, the way on-line investors make financial decisions may be different from that of traditional investors. This study explores the difference in patterns of use of both traditional and on-line sources of investment information by on-line investors compared to traditional investors. As sources of financial information proliferate, how are traditional media and on-line information channels used and what gratifications do investors derive from them? It is hoped that this study can pave the way for more in-depth analyses of how audience needs mitigate or enhance the effects of traditional and on-line information sources.

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[2] On-line accounts include proprietary systems such as touch-tone services, but which are quickly being replaced by Internet-based systems.

Specifically, this study asks:

1. What are the differences in patterns of use of both traditional and on-line sources of investment information by cyberspace investors compared to traditional investors?
2. Do cyberspace investors make use of traditional and on-line sources of investment information more than traditional investors?
3. Are cyberspace investors more dependent on on-line and traditional sources of investment information than traditional investors?

THEORETICAL FRAMEWORK AND LITERATURE REVIEW

The Uses and Gratifications Leading to Dependency Model

The uses and gratifications perspective has been applied to study a wide range of mass media effects. This approach regards media as sources of influence amid other sources and sees media audiences as active communicators. According to the early propositions of this theory, media audiences actively seek out certain forms of preferred content, make use of what they obtained, and experience different kinds of gratifications from them. Researchers have employed this approach to assess how people consume the media; "that is, what purposes or functions the media serve for a body of active receivers," and to explain media effects "in terms of the purposes, functions or uses (and gratifications) as controlled by the choice patterns of receivers" (Fisher, 1978: 159).

To the extent that a medium of communication provides audience members with the gratifications they seek, a dependency on that medium may develop. Ball-Rokeach and DeFleur (1976, 1982, 1998) proposed the dependency model which interprets the interrelationships among society, media, and audiences. They defined dependency as "a relationship in which the satisfaction of needs or the attainment of goals by one party is contingent upon the resources of another party" (1976: 6). They argued that dependency relationships are likely to occur during times of societal change and conflict because the stressful experience motivates most people to resolve the ambiguousness of their situation. As the level of societal change or perceived uncertainty increases, audience dependency on the media also increases. The perceived uncertainty influences individual needs or motives for new or relevant information. Different motives may then foster different gratification-seeking behaviors, and varying dependencies on communication channels. The degree of individual dependence on media information is thus the key variable in understanding when and why media messages exert influence upon audiences. In case an individual requires some kind of information to function in a changing world, "the more salient the information needs, the stronger is the motivation to seek mediated information to meet these needs, consequently the stronger is the dependency on the medium, and the greater is the likelihood for the medium to affect cognition, feelings, and behavior" (Rubin & Windahl, 1986: 185).

In a study that investigates media system dependency (MSD) relations, Loges (1994) found that media dependencies are positively related to perceptions of threats in society. He defined the intensity of MSD relations as "the extent to which the media system's informational resources are perceived by an individual to be particularly helpful in the pursuit of his or her goals" (Loges et al., 1993; Ball Rokeach, 1998). The findings showed that higher levels of threat perception in the social environment result in more intense audience MSD relations. Previous research into MSD relations has also demonstrated that certain media effects, such as persuasion (Ball-Rokeach et al., 1984; Grant et al., 1991) and parasocial interaction (Grant et al., 1991) can be enhanced when MSD relations are particularly intense.

In addition to societal conditions and audience motives for media use, the uses-and-gratifications-dependency model also takes the role of functional alternatives into account. According to the model, mediated and non-mediated channels may be functional alternatives to each other when they perform similar functions. Audiences' social and psychological characteristics such as education level and socioeconomic status govern the potential to use these functional alternatives. Audiences' different motives may also lead to varying degrees of functional alternative use. An individual with salient motives to seek certain types of information, for example, may attempt to use a specific medium. The greater the number and centrality of the specific information served by the medium, the more the individual comes to rely on it, the greater is the dependency on and influence of this specific medium (Rubin et al., 1986).

This model, therefore, provides a framework to explain the interrelationships among societal conditions, media, and audiences. Applying the propositions of the theory to this study, it can be hypothesized that: the higher an investor's perceived uncertainty in the investing environment, the more intense his/her MSD relations will be. In the absence of brokers' advice, on-line investors may experience higher levels of uncertainty and anxiety than traditional investors, prompting them to seek traditional and/or on-line investment information more frequently. The narrower an on-line investor's information seeking strategies and functional alternative use, the greater is his/her media dependency level and the likelihood of being influenced by the media in making investment decisions. As Rubin et al (1986) said,

> "[a] person who desires to reduce uncertainty about investing money might speak with financial advisers, family members, or business associates, and also use special media content (e.g., business columns in newspapers). If information seeking strategies are narrow and a person is reliant on a certain medium, that individual's cognitions, attitudes, and behavior may be influenced more directly" (P. 196).

However, Rubin listed only four major classifications of information channels: financial advisers, family members, business associates, and mass media. It is conceivable that on-line investors may demonstrate wider information seeking strategies than traditional investors because they may actively seek alternative information sources such as on-line chat rooms or investment club members to replace the role of brokers. The more diversified an investor's functional alternative use is, the lower his/her dependency level will be. This study thus examines how investors use investment information sources and their dependencies on these communication sources with regard to the perceived nature of the investment climate (or market uncertainty) under which they operate.

Investor Surveys

Between August and September 1998, despite the prospect of a global financial market meltdown, a survey regarding the adoption of cyberspace investing was conducted by an independent polling and research firm, Richard Day Research, Incorporated[3]. It consisted of telephone interviews with a random national sample of 616 people with active brokerage accounts. Of the respondents, 52 had on-line accounts and 564 did not. The results showed that 81 percent of individual investors (80 percent of on-line investors and 82 percent of non-on-line investors) believe that most people will be investing on-line in the next five years. One of the noteworthy findings is that 67 percent of on-line respondents said that they are watching news and investing at the same time; 64 percent of non-on-line respondents said the same. Also, 61 percent of on-line respondents reported that they shared strategies/ information in on-line discussion groups, while 51 percent of non-on-line respondents did the same (Richard Day, 1998).

In 1999, a study which investigated how individual investors use the Internet for investment research was conducted by PR Newswire and the National Association of Investors Corporation (NAIC) through Media Mark Inc, a market research firm. The respondents of the study were recruited from the NAIC membership through three channels: a full-page ad in the NAIC magazine *Better Investing*, a disguised ad in the publication's company web site http://www.better-investing.org, and on-site at the NAIC National Conference held in Nashville, TN, September 15-19, 1999. Of the 622 respondents, 79.6 percent connects to the Internet via a telephone modem, 49 percent has participated in on-line trading, and 51.4 percent cites researching stock/investment ideas as the main reason they use the Internet for personal finance.

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[3] Although the research was conducted with E-trade Securities, its involvement was not mentioned during the interview. The research results can be found at the home page of E-trade, press release of September 1998, http://www.etrade.com/cgibin/gx.cgi/AppLogic+home.

The survey listed 15 sources of investment information, including Internet news/financial sites, newspapers, individual corporate web sites, brokers/financial advisors/accountants, the investor relations contact at a corporation/company, business/financial magazines, investment clubs, news releases from a company, radio, TV, magazines, library resources, educational associations, family/friends, and others. The results showed that Internet news/financial sites are the top-ranked source of investment information: 95 percent of respondents ranked this item as the top two information sources[4]. Within this group, 68 percent ranked the Internet as "extremely important." Business/financial magazines were the second top-ranked source of investment information: 77 percent selected it as one of the top two, 27 percent of which ranked it as "extremely important." Seventy-five percent included investment clubs in the top two with 48.2 percent ranking it as "extremely important."

The majority of the respondents (74.1 percent) said that they visit the corporate web site before investing in a company, while 53.6 percent said they visit the site several times before making the decision to invest. Regarding the respondents' exposure to the Internet, 45.7 percent said that they access the Internet more than once a day; 33 percent uses the Web daily; 15.6 percent, 3-6 times per week; 4.3 percent, 1-2 times per week; and 1.4 percent, less than once a week.

Although this survey makes no comparison between traditional and cyberspace investors, it provides evidence that the Internet promises to be the medium to use in investing, although the traditional media are still important sources of investment information.

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[4] In the survey, a five-item response scale was used: 1 = not at all important, 3 = neutral, 5 = extremely important. Ninety-five percent of the respondents selected Internet news/financial sites as 4 or 5.

In comparison, this study examines uses of, gratifications derived from, and dependencies on 11 information channels grouped into three main categories: (1) **on-line information sources (OIS)** which include information provided on-line by listing companies, on-line versions of traditional mass media, other on-line information providers such as Yahoo, interpersonal on-line communications such as chat rooms, and on-line information provided by a broker; (2) **traditional information sources (TIS)** which include mass media such as newspapers, printed documents provided by listing companies, verbal or printed information provided by a broker and information obtained through library or independent research tools such as Value Line; (3) **interpersonal information sources (IPIS)** which include friends, neighbors, colleagues, and members of investment clubs. The variety of potential information sources was necessary in order to explore differences in patterns of use.

Considering the foregoing literature, this study hypothesizes that:

1. On-line investors are more uncertain about the investing environment than traditional investors.
2. On-line investors use investment information sources more often than traditional investors (i.e., on-line investors spend more time on investment information sources than traditional investors).

Because on-line investors may use more information channels to resolve their uncertainty, it is also hypothesized that:

3. On-line investors' functional alternative uses are more diversified than traditiona investors.

Because of the close relationship between cyber-trading and OIS uses, it is also logical to hypothesize that:

4. On-line investors use OIS more often than traditional investors.
5. On-line investors have more intense dependency relations on OIS than traditional investors.

METHODOLOGY

A one-shot national mail survey was employed to test the study's hypotheses. The survey respondents were randomly selected from the members lists of the American Association of Individual Investors (AAII) and the National Association of Investors Corporation (NAIC).

AAII is an independent, not-for-profit organization formed in 1978 for the purpose of educating investors on how to manage their own assets through publications, seminars, local chapter meetings, etc. As of December 1999, AAII has 175,000 individual members. NAIC, on the other hand, is composed of 750,000 individual and corporate members in the United States (NAIC, 1999). Like AAII, it is a non-profit, tax exempt organization established in 1951 with a mission to provide investment information, education, and support to investors. NAIC is also a charter member of the World Federation of Investors, providing investment education in over 17 countries worldwide.

Sampling and Data Collection

A two-stage sampling technique was applied to arrive at the final set of respondents. AAII and the NAIC provided this study each with 500 members' names and addresses. As AAII's member database is kept in numerical order, it selected every 30th name in its list using a random start. Because NAIC's current member list is kept on the basis of zip code, the Association, for its part, selected every 890th name in its member database.

A random sample of 500 investors (250 from AAII, 250 from the NAIC) was then drawn from the sampling frame of 1,000 by using a table of random numbers. The respondents received questionnaires with business reply envelopes, a postcard two weeks after the first mailing and a second wave of questionnaires two weeks after the postcards were sent out.

Twenty-four questionnaires (4.8 percent) were undeliverable because the addressees either moved or passed away. Seven (1.4 percent) claimed that they were not investors or that they do not make investing decisions. One hundred ninety five valid responses came back (105 from AAII, 88 from the NAIC), for a return rate of 41.6 percent.[5]

Some differences were observed between the respondents from the two organizations. There were more female NAIC members and they were less educated than their AAII counterparts. They also had a smaller mean investment portfolio size, a lower mean annual household gross income, and fewer years of investing experience.

Conceptual Definitions. The relevant variables were conceptually defined as follows:

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[5] For this simple random sample with 195 valid responses, the accuracy of survey results fall within the plus or minus 7.5 percent confidence interval for proportion variables with a 95 percent confidence level.

Variable	**Conceptual Definition**
On-line Investors	Investors who use on-line services (i.e., a Web-based brokerage firm) to place trades.
Traditional Investors	Investors who execute trades exclusively with the assistance of human brokers.
Mixed Investors	Investors who use on-line services to trade and also execute trades with assistance from brokers.
Traditional investment information sources (TIS)	These sources include all kinds of traditional mass media such as TV, magazines, newspapers, and radio; printed documents provided by companies such as company annual reports, 10K reports, prospectuses and brochures. It also includes independent research tools such as Value Line, Moody's and Standard & Poor's as well as information provided by a broker via telephone and mailings of printed materials.
On-line investment information sources (OIS)	These sources include information provided on-line by companies such as company announcements, annual reports and balance sheets; on-line versions of traditional mass media such as Wall Street Journal on-line and CNN TV; other on-line information providers such as Yahoo, company web sites, Dow Jones electronic information receiving center, AOL and Lexis-Nexis; interpersonal on-line sources such as chat rooms, E-mails, discussion groups and listservers; on-line information provided by a broker via e-mails or access provided to the broker's company Web site.
Interpersonal investment information sources (IPIS)	These sources include information obtained from friends, neighbors, and colleagues at the office as well as information provided by members of investment clubs.

Operationalization of Variables. Respondents were asked to self-select the investor category under which they may fall. As such, a respondent can be (1) an on-line investor, (2) a traditional investor, or (3) a "mixed" investor.

Hypothesis 1: On-line investors are more uncertain about the investing environment than traditional investors.

Three statements were devised to capture investors' perceived uncertainty or the degree to which they find today's financial market ambiguous. They were asked the extent to which they agree or disagree with the following statements: (1) In this fast-changing business climate, an investor must constantly monitor breaking news and be prepared to trade; (2) Today's business climate for investors is very uncertain; (3) I invest for the long haul, so I am less interested in breaking news or sudden market fluctuations. A 1 to 5 response scale (strongly disagree to strongly agree) was used for each item. For the first two statements, a high score means greater perceived uncertainty. For the third statement, a low score equates with lower perceptions of uncertainty. The score for uncertainty perception equals the sum of one's responses to these three statements after recoding the responses to the third statement.

Hypothesis 2: On-line investors use investment information sources more often than traditional investors (i.e., on-line investors spend more time on investment information sources than traditional investors).

Eleven investment information sources were collapsed into three main categories -- OIS, TIS, IPIS -- to measure the range of respondents' information seeking behavior. **OIS** include information provided on-line by listing companies, traditional mass media, and brokers. It also includes interpersonal on-line communications such as chat rooms and on-line information providers such as Yahoo. **TIS** include mass media such as newspapers, printed documents provided by listing companies, verbal or printed information provided by a broker and information obtained through library or independent research tools such as Value Line. **IPIS** include friends, neighbors, colleagues, and members of investment clubs.

A 1 to 5 response scale (never use, use once per month or less, use once per week, use several times per week, and use daily) was applied to measure how often investors use the 11 channels. A high score equals greater exposure to a medium (i.e., using a medium daily). A score for information source use is the sum of responses to how frequently the 11 information sources were accessed.

Hypothesis 3: On-line investors' functional alternative uses are more diversified than those of traditional investors.

Because the 11 information sources can perform similar functions in making investment decisions, they can be regarded as functional alternatives to each other. Two dimensions of an investor's functional alternative use were measured: exposure time and a grade that assesses the performance of each information source. First, sources that were used several times per week or daily (4 or 5 in the response scale) were considered legitimate functional alternatives. A respondent has a more diversified functional alternative use if more sources were ranked 4 or 5 in the scale.

Second, respondents were also asked to provide a letter grade of A, B, C, D, or F for each of the 11 information sources. Those graded A or B were considered as valid functional alternatives. The more the sources were given grades of A or B, the more diversified a respondent's functional alternative uses are. A score for functional alternative use is the sum of responses to how frequently the sources were used and how they were graded.

Hypothesis 4: On-line investors use on-line information sources more often than traditional investors.

A 1 to 5 response scale (never use, use once per month or less, use once per week, use several times per week, and use daily) was applied to measure how often investors use online information channels. A high score equals greater exposure to them. A score for OIS use is the sum of responses to how frequently these on-line information channels were used.

Hypothesis 5: On-line investors have more intense dependency relations on on-line investment information sources than traditional investors.

The intensity of media dependency relations has been defined as the extent to which the media system's informational resources are perceived by an individual to be particularly helpful in the pursuit of his/her goals (Loges et al., 1993; Loges, 1994; Ball Rokeach, 1998). This study extends this definition to all potential information sources for investment decision-making to be able to make useful comparisons. Accordingly, this study devised two statements to measure the intensity of investors' dependence on the 11 information channels. They were asked how useful or important the sources were to them as a means of monitoring information about stocks or the market in general. They were also asked to rate how useful or important the sources were as a means of actually determining whether they will buy or sell a particular stock. Collapsing the 11 channels again into three major categories of on-line, traditional media and interpersonal communication sources, the aggregate score for each group was determined by adding the responses. A 1 to 5 response scale (useless to extremely useful) was used. A high score for the on-line information sources equals more intense dependency relation on those sources. A respondent's score for the intensity of the dependency relation is the sum of his/her responses to the OIS items.

Respondents were also asked to provide their age, gender, education, annual household income, PC ownership/availability, investment portfolio size, trade frequency per month, and the number of years they have been investing.

RESULTS AND DISCUSSION

Of the 195 valid responses, 36.3 percent came from female and 63.7 percent came from male AAII and NAIC members. Thirty-seven respondents (19.4 percent) were on-line investors, 88 (46.1 percent) were traditional investors, and 66 (34.6 percent) were mixed investors.

Demographic Description

On the average, the respondents have been investing for about 18 years, able to build an average investment portfolio size of about $300,000. They trade more than twice a month. They are relatively mature, with a mean age of 55. The average investor has a college degree and has a mean annual gross household income of $90,000 - $100,000. A chi-square and an ANOVA were used to assess whether significant demographic differences existed among the three types of investors. The results in Tables 1 and 2 indicate that there is no relationship among the three investor types in terms of demographic factors, except for age and income level. According to the Scheffe test of investor age in Table 3, while there is no significant age difference between on-line and mixed investors, traditional investors are older than on-line and mixed investors by about 8.5 years. In terms of trade frequency, no significant difference among investors has been found. However, online investors have higher income levels compared to traditional investors (Table 4).

Results also show that there is a significant relationship between PC ownership and/or availability and type of investor (Table 5). As expected, all on-line investors own or are able to access a computer while 16 out of 88 traditional investors do not have personal computers.

In a nutshell, investor age, income level, and PC availability can be seen as predictors of investor types (i.e., the means of executing trades). Investors who participate in on-line investing (whether on-line investors or mixed investors) are relatively young with higher annual household incomes. They have facilities available to communicate on-line. Nonetheless, there is no difference among investor groups in terms of gender, investing experience, education level, and investment portfolio size.

Table 1. Summary of ANOVA results testing the difference among the three types of investors in terms of demographic variables

	df	F	Sig.
Years of investing	190	2.215	.112
Trade frequency	185	3.248	.051
Investor age	185	10.915	.000
Education	190	2.326	.100
Income	176	3.96	.021
Portfolio size	175	0.085	.919

Table 2. A Chi-square comparison of gender differences by investor type

	On-line investor	Traditional investor	Mixed investor	Total
Female	7 (3.7%)	35 (18.5%)	27 (14.3%)	69 (36.5%)
Male	29 (15.3%)	53 (28.0%)	38 (20.1%)	120 (63.5%)
Total	36 (19.0%)	88 (46.6%)	65 (34.4%)	189 (100%)

N = 189; chi-square = 5.636; df = 2; p (2-sided) = .060

Table 3. A Scheffe test on age differences by investor type

Groups compared	Mean difference	Std. error	Sig.
On-line - Traditional	50.31-59.01=-8.70	2.44	.002
On-line- Mixed	50.31-50.83=-0.52	2.55	.980
Traditional - Mixed	59.01-50.83=8.18	2.00	.000

Mean age for on-line investors=50.31, traditional investors=59.01; mixed investors=50.83

Table 4. A Scheffe test on annual gross household income by investor type

Groups compared	Mean difference	Std. error	Sig.
On-line - Traditional	8.61-6.67=1.94	.72	.028
On-line- Mixed	8.61-6.82=1.79	.75	.061
Traditional - Mixed	6.67-6.82=-0.15	.61	.969

Annual gross household income was coded as 6 = $80,000-90,000; 7 = $90,000-100,000; 8 = $100,000-$110,000; 9 = $110,000-$120,000

Table 5. A chi-square comparison of PC availability by type of investor

	On-line	Traditional	Mixed	Total
PC available	36 (18.9%)	72 (37.9%)	64 (33.7%)	172 (90.5%)
No PC available	-	16 (8.4%)	2 (1.1%)	18 (9.5%)
Total	36 (18.9%)	88 (46.3%)	66 (34.7%)	190 (100%)

N = 190; chi-square = 14.744; df = 2; p = .001

Hypothesis 1. On-line investors are more uncertain about the investing environment than traditional investors.

This hypothesis assumes that on-line investors are more uncertain about the investing environment partly because they do not have the assistance of opinion leaders such as experienced brokers. Results of an ANOVA test to measure differences in perceived uncertainty among investors show no significant difference among investors (p = .084) in terms of uncertainty perceptions. Therefore, the hypothesis was not supported.

In order to determine how investors cope with their perceived ambiguous situation, they were classified in terms of their assessments of the extent of uncertainty in the investment climate. Because respondents' uncertainty level scores can fall between 3 and 13, those whose uncertainty scores range from 3 to 5 were placed in the low uncertainly group. Scores from 6 to 9 were placed in the middle, and scores from 10 to 13 were classified in the high uncertainly group.

Tables 6 and 7 show the mean scores of the three uncertainty groups' uses of and the grades given to the 11 information channels. Those who see the financial environment as highly uncertain spend more time on all information channels, especially those that are on-line. In fact, all on-line channels are graded higher by investors in the middle and high uncertainty groups. The three groups did not differ in terms of their use of traditional media sources, but the low uncertainly group tends to grade such sources, especially print materials from companies, higher. Although the low uncertainly group uses interpersonal communication sources less often than those who belong to the two other uncertainty levels, all groups deemed these sources of great value.

Table 6. Mean uses of different information sources by investors of different uncertainly levels

	Low uncertainty	Medium uncertainty	High uncertainty	Total
On-line sources				
Company Web sites	2.15	2.20	2.79	2.36
On-line versions of traditional media	1.76	2.07	2.69	2.19
On-line information providers (e.g.,Yahoo)	2.52	2.86	3.21	2.90
On-line chat rooms or discussion groups	1.41	1.46	1.84	1.56
On-line information from a broker, including e-mails and Web sites	1.45	1.41	1.77	1.52
Traditional sources				
Traditional mass media (e.g., TV, newspapers, magazines)	3.65	3.60	4.04	3.73
Printed materials from companies	1.91	2.07	2.00	2.02
Verbal or printed information from brokers	1.91	1.82	2.06	1.90
Independent research tools (e.g., Moody's)	2.91	2.71	2.92	2.81
Interpersonal sources				
Information from friends, neighbors, and colleagues	1.19	2.08	2.54	2.18
Information from investment clubs	1.76	1.91	1.91	1.88

The uses of information sources were measured by an ordinal scale: 1=never use, 2=use once a month, 3=use once a week, 4=use several times a week, 5=use daily.

Table 7. Mean grades given to different information sources by investors of different uncertainty levels

	Low uncertainty	Medium uncertainty	High uncertainty	Total
On-line sources				
Company Web sites	2.35	2.48	2.42	2.44
On-line versions of traditional media	1.82	2.39	2.31	2.27
On-line information providers (e.g., Yahoo)	2.62	2.99	2.84	2.88
On-line chat rooms or discussion groups	0.89	1.39	1.87	1.45
On-line information from brokers, including e-mails, Web sites	2.08	2.33	2.56	2.35
Traditional sources				
Traditional mass media (e.g., TV, , newspapers, magazines)	2.47	2.73	2.76	2.69
Printed materials from companies	2.42	2.21	2.08	2.21
Verbal or printed information from brokers	2.45	2.39	2.03	2.29
Independent research tools (e.g., Moody's)	2.91	2.71	2.92	2.81
Interpersonal sources				
Information from friends, neighbors, and colleagues	2.05	2.08	2.21	2.11
Information from investment clubs	3.99	2.90	2.96	2.93

Grades given to information sources were assigned numeric values so that F=0, D=1, C=2, B=3, A=4.

Hypothesis 2. On-line investors use investment information sources more often than traditional investors (i.e., on-line investors spend more time on investment information sources than traditional investors).

To test whether there are differences in information source exposure levels among investors, an ANOVA and a Scheffe test were done. The results in Table 8 indicate that there is a significant variation between on-line and traditional investors when it comes to the magnitude of investment source use. The former *spend more time* searching investment sources for information than traditional investors. The mean difference between them is 5.3. Hypothesis 2 was therefore supported. It is important to note, however, that no difference was found between on-line and mixed investors in terms of their source exposure level. In other words, investors who participate in cyber-investing (i.e., both on-line and mixed investors) tend to spend similar amounts of time on investment information sources.

Table 8. ANOVA and Scheffe results comparing three types of investors by exposure to information sources

	df	F-value	P-value
Exposure	181	13.751	.000

Groups compared	Mean difference	Std. error	P-value
On-line - Traditional	27.72-22.38=5.34	1.24	.000
On-line- Mixed	27.72-26.88=0.87	1.29	.806
Traditional - Mixed	22.38-26.88=-4.50	1.03	.000

Tables 9 and 10 detail how the three investor groups used and graded the 11 investment channels. Except for the use of verbal and printed information from brokers, on-line and mixed investors spend more time on all channels. The groups do not differ significantly in their use of traditional and interpersonal sources. However, on-line and mixed investors indicated higher levels of on-line source use and also graded these sources highly.

It can be surmised, therefore, that traditional investors' lower mean exposure level is probably a result of not using on-line sources frequently.

Table 9. Mean uses of different information sources among the three types of investors

	On-line investors	Traditional investors	Mixed investors	Total
On-line sources				
Company Web sites	3.08	1.76	2.72	2.36
On-line versions of traditional media	2.50	1.84	2.49	2.20
On-line information providers (e.g.,Yahoo)	4.00	2.14	3.22	2.89
On-line chat rooms or discussion groups	2.22	1.27	1.58	1.56
On-line information from a broker, including e-mails and Web sites	1.78	1.17	1.82	1.52
Traditional sources				
Traditional mass media (e.g., TV, newspapers, magazines)	3.95	3.80	3.54	3.74
Printed materials from companies	2.05	2.02	2.03	2.03
Verbal or printed information from brokers	1.41	2.00	2.08	1.91
Independent research tools (e.g., Moody's)	2.76	2.70	2.98	2.81
Interpersonal sources				
Information from friends, neighbors, and colleagues	2.19	2.06	2.29	2.17
Information from investment clubs	1.81	1.79	1.97	1.86

The uses of information sources were measured by an ordinal scale: 1=never use, 2=use once a month, 3=use once a week, 4=use several times a week, 5=use daily.

Table 10. Mean grades given to different information sources by the three types of investors

	On-line investors	Traditional investors	Mixed investors	Total
On-line sources				
Company Web sites	2.58	2.03	2.67	2.44
On-line versions of traditional media	2.31	2.05	2.48	2.29
On-line information providers (e.g., Yahoo)	3.25	2.50	2.96	2.87
On-line chat rooms or discussion groups	1.67	1.31	1.28	1.43
On-line information from brokers, including e-mails, Web sites	3.00	1.77	2.29	2.36
Traditional sources				
Traditional mass media (e.g., TV., newspapers, magazines)	2.43	2.84	2.72	2.71
Printed materials from companies	2.03	2.16	2.38	2.21
Verbal or printed information from brokers	1.85	2.52	2.18	2.31
Independent research tools (e.g., Moody's)	3.03	3.27	3.22	3.21
Interpersonal sources				
Information from friends, neighbors, and colleagues	1.72	2.38	2.06	2.13
Information from investment clubs	2.89	2.93	2.95	2.93

Grades given to information sources were assigned numeric values so that F=0, D=1, C=2, B=3, A=4.

Hypothesis 3. On-line investors' functional alternative uses are more diversified than those of traditional investors.

An ANOVA and a Scheffe test conducted to test Hypothesis 3 provided evidence that traditional investors' functional alternative uses are significantly *less diversified* than those of on-line and mixed investors (Table 11). The third hypothesis was thus supported. Again, no difference was found between on-line and mixed investors in terms of their functional alternative uses. As such, investors who participate in on-line investing have more diversified functional alternative uses than traditional investors.

Table 11. ANOVA and Scheffe results comparing the three types of investor in terms of their functional alternative uses

	df	F-value	P-value
Functional alternative uses	106	4.928	.009

Groups compared	Mean difference	Std. error	P-value
On-line - Traditional	7.47-5.20=2.27	.85	.030
On-line- Mixed	7.47-6.86=0.61	.86	.773
Traditional - Mixed	5.20-6.86=-1.66	.67	.047

Hypothesis 4. Cyber investors use on-line information sources more often than traditional investors.

The results of an ANOVA test indicate that there is no significant difference in traditional and interpersonal source uses among the three types of investors, but there is a significant variation in the use of on-line sources among them (Table 12). According to the Scheffe test results in Table 13, traditional investors tend to use *fewer* on-line sources than on-line and mixed investors (mean diff.= 5.45). The mean difference between mixed and traditional investors, on the other hand, is 3.75. Consistent with the results of exposure level and functional alternative use comparisons, investors who employ cyber-trading significantly differ from traditional investors in their use of on-line information sources. The fourth hypothesis was therefore supported. The findings indicate, however, that on-line and mixed investors do not give up traditional sources even though they access new information channels on-line.

Table 12. ANOVA results comparing the three types of investor in terms of their on-line, traditional, and interpersonal information source uses

	df	F-value	P-value
On-line information source use	182	32.447	.000
Traditional information source use	185	.358	.699
Interpersonal information source use	186	1.174	.311

Table 13. Differences in on-line information source use among the three investor types

Groups compared	Mean difference	Std. error	P-value
On-line - Traditional	13.61-8.16=5.45	.76	.000
On-line- Mixed	13.61-11.91=1.70	.79	.100
Traditional - Mixed	8.16-11.91=-3.75	.63	.000

An important axiom underlying the dependency model is that societal conditions (the perceived market uncertainty, in this case) influence individual information seeking behavior. For example, an investor may actively seek relevant information to resolve an ambiguous situation. In other words, there should be a close relationship between investors' uncertainty level and their information seeking behaviors. The results of a correlation analysis between investors' perceived uncertainty level and their information-seeking behaviors (Table 14) lend support to this proposition. Although the first hypothesis was not supported (i.e., there is no significant difference among investors in terms of market uncertainty perception), the extent to which investors perceive the investing environment as uncertain was found to be significantly related to exposure level, functional alternative use, and OIS use. The correlations, however, were relatively weak.

Table 14. Bivariate correlation coefficients among selected variables.

	Age	Income	Perceived uncertainty	Exposure to info sources	Functional alternative uses	OIS use	Dependence on OIS
Age p-value	1.000 .	-.067 .377	.026 .728	-.263* .000	-.374* .000	-.353* .000	-.440* .000
Income p-value		1.000 .	-.121 .113	.091 .234	.172 .086	.113 .140	.076 .347
Uncertainty p-value			1.000 .	.260* .000	.281* .003	.274* .000	.146 .061
Exposure p-value				1.000 .	.865* .000	.863* .000	.607* .000
Functional alt. uses p-value					1.000 .	.717* .000	.643* .000
OIS use p-value						1.000 .	.725* .000

* Correlation is significant at the 0.01 level (2-tailed).

Hypothesis 5. On-line investors have more intense dependency relations on on-line sources than traditional investors.

An ANOVA test was performed to measure the differences among investor groups in terms of their dependence on on-line, traditional, and interpersonal information sources (Table 15). The results show that they significantly differ in their dependence on on-line and traditional sources.

Two Scheffe tests were then performed to determine the nature of these differences. As expected, the results in Table16 reveal that traditional investors' on-line source dependence is significantly *lower* than those who participate in cyber-trading. Once again, no difference between on-line and mixed investors was found. Hypothesis 5 was thus supported.

Table 15. ANOVA results comparing the three types of investor in terms of their dependence on on-line, traditional and interpersonal information sources

	df	F-value	P-value
Dependence on on-line sources	162	22.22	.000
Dependence on traditional sources	163	5.43	.005
Dependence on interpersonal sources	169	.63	.536

Table 16. Differences in on-line information source dependence among the three types of investors.

Groups compared	Mean difference	Std. error	P-value
On-line - Traditional	28.24-18.42=9.82	1.72	.000
On-line- Mixed	28.24-26.09=2.15	1.78	.483
Traditional - Mixed	18.42-26.09=-7.67	1.44	.000

It is interesting to note that the correlation between functional alternative use and dependence on on-line sources (Table 14) is positive and strong (.643). One of the propositions of the dependency model is that there is a negative relationship between functional alternative use and dependency relations (i.e., the more diversified an investor's functional alternative use is, the lower his/her media dependency relations will be). The correlation result contradicts the hypothesized direction probably because on-line sources are functional alternatives to traditional and interpersonal sources in this study. As a result, the higher an investor's functional alternative use, the more frequent his/her on-line consumption is, and consequently the more intense his/her dependence on on-line sources will be. This explanation seems supported by the correlation between and on-line sources use and exposure level (.863), between on-line sources use and functional alternative use (.717), and between on-line sources use and dependence on on-line sources (.725).

The results in Table 16 show that mixed investors differ neither from traditional investors nor on-line investors on the use of traditional media. However, on-line investors' dependence on traditional sources is *less* intense than that of traditional investors. As expected, cyber investors are more dependent on on-line sources; traditional investors depend more on traditional media for investment information; and mixed investors rely on both in interpersonal and on-line sources.

Table 16. Differences in traditional information source dependencies among the three types of investors

Groups compared	Mean difference (I-J)	Std. error	P-value
On-line - Traditional	23.03-26.48=-3.45	1.07	.007
On-line- Mixed	23.03-24.79=-1.76	1.12	.290
Traditional - Mixed	26.48-24.79=1.69	.90	.177

CONCLUSIONS AND SUGGESTIONS FOR FUTURE STUDY

With the rapid growth of cyberspace investing, the purpose of this study was to figure out the patterns of use of investment information sources among different types of investors, considering the perceived market uncertainty under which they operate. It tried to examine investors' information seeking behaviors and their dependence on financial information sources so as to shed some light on the potential impact of these sources on investment decision-making.

The results were in line with the findings of previous studies and surveys (e.g., Davis, 1999; Schifrin, 1999) which suggest that while the Internet is an important medium to use in investing nowadays, the mass media and traditional information sources still play a crucial role in providing investment information to investors and in helping them make financial decisions.

Traditional Investors

The results indicate that traditional investors are relatively more mature than on-line and mixed investors, with a mean age of 59. Although 82 percent of them have the facilities to communicate on-line, their on-line sourceuse is lesser compared to on-line and mixed investors. They are likely to resort more to the use of traditional and interpersonal sources to obtain investment information. This group does not solicit information from investment clubs frequently (mean score of use = 1.69), but they consider such source of great value (mean score of grade = 2.93). Traditional mass media and independent research tools are heavily used and highly graded by this group. The statistical tests also suggest that traditional investors are more dependent on traditional media, compared to on-line investors.

On-line Investors

Cyber groups (i.e., both on-line investors and mixed investors) were found to be relatively young investors compared to the traditional ones. They are also active users of various investment information sources. They spend more time searching investment information and have more diversified functional alternative uses compared to traditional investors. Statistical test results show no difference among the three investor groups in terms of traditional media and interpersonal source use. In other words, while cyber groups utilize new information channels frequently, they still use *as much or more* traditional and interpersonal channels as traditional investors. As expected, cyber groups heavily use company Web sites and on-line information providers, but they do not give up traditional mass media and independent research tools altogether. In this regard, on-line sources can be said to play an *additive*, rather than a *substitutive*, role in providing investors with the information they need.

Despite similar traditional and interpersonal information source exposure across investor types, it is still premature to conclude that these two are going to remain the primary information sources for investors. This is because on-line investors have been shown to be more dependent on on-line sources, consistently giving them higher marks in terms of performance. As such, their dependence on traditional media is less and intense -- and is expected to gradually decline over time. Longitudinal studies will be able to track shifts or changes in source dependence among investors over time.

On the other hand, even though the credibility and reliability of information from on-line chat rooms were of great concern in previous lawsuits and reports (e.g., Hannon, 1997), this study's results indicate that such on-line interpersonal communications were not the information sources preferred by investors. They were the second least used and were graded the lowest by investors in general.

Mixed investors

Although they share some characteristics with on-line investors, in some cases, their information seeking behaviors are in-between those of on-line and traditional investors. For example, even though they employ new Internet sources, they have not given up and are still dependent on traditional sources such as human brokers. This group's exposure to traditional and interpersonal sources are the highest. Their on-line exposure is in between those of on-line and traditional investors. As a result, although their dependence on on-line sources is as intense as on-line investors, but their dependence on traditional media does not differ from that of traditional investors.

In some ways, they combine the information use strategies of both on-line and traditional investors. Further studies may need to examine how the information-seeking behavior of this group will change in the future in tandem with the growth of cyberspace investing.

This study lends support to the dependency model in that a relationship was found between investor's perceived uncertainty levels and their information-seeking behaviors. That is, the higher an investor's uncertainty level, the higher the level of his/her media exposure, functional alternative use, and on-line information source use. Higher on-line source use also means greater dependency on cyber sources.

Statistical tests failed to support the notion that there is a difference among investors in terms of their perceived market uncertainty. Moreover, the relationship between investors' perceived uncertainty level and information-seeking behaviors is not strong. The correlation coefficients are in fact weaker than those between information seeking and age or trading frequency.

This study also found that on-line investors have more diversified functional alternative uses, tending to seek multiple information sources. However, what brought this about cannot be ascertained in this study that did not specifically examine causal relationships. That is, on-line investors' practice of using multiple information sources and relying more on-line sources may not be the outcomes of perceived market conditions. One can even suggest that cyberspace investing is a product of multiple information use.

According to the diffusion theory (Rogers, 1962), "earlier adopters (of an innovation) utilize a greater number of different information sources than do later adopters" (p. 313). By extension, Abbott (1999) suggested an additive approach to diffusion theory that conceptualizes higher use of various information sources by earlier adopters and increase use of information sources throughout the adoption process. This additive approach seems helpful in explaining the information-seeking behavior of on-line investors. As cyberspace investing can be treated as an innovation in the United States and worldwide, future research may apply the diffusion theory to investigate the dissemination of this innovation and the information seeking behaviors of its adopters.

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Interactivity: A New Approach

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Abstract

This paper extensively reviews the various approaches of interactivity studies and summarizes the ample definitions and dimensions of interactivity suggested by researchers. The author argues that there exist two types of interactivity and the researchers' failure of recognizing such fact has led to the current confusion prevailed in interactivity studies. A new model was developed and suggested to help the future research. The model suggests that the user perception is the key element in studying interactivity.

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Introduction

Although interactivity has long been a core concept of new communication technologies such as computers, there has been lack of agreement to the meaning of the term (e.g., Rafaeli & Sudweeks, 1997; Steuer, 1992; Walther & Burgoon, 1992). Despite the lack of agreement to the meaning, interactivity was seen as the key advantage of computer-mediated communication (CMC) and new media (Morris & Ogan, 1996; Pavlik, 1996; Rafaeli & Sudweeks, 1997). While the scholarly work of defining interactivity failed to produce coherent outcomes, different range of meanings emerged. Many definitions of interactivity have been suggested in various academic fields (Haeckel, 1998; Heeter, 1989; Morrison, 1998; Steuer, 1992; Rafaeli & Sudweeks, 1997; Zack, 1993). Jensen (1998) points out that "Along with terms like 'multimedia', 'hypermedia', 'media convergence', 'digitization' and 'information superhighway', 'interactivity' is presumably among the words currently surrounded by the greatest amount of *hype*. ... At the same time, it seems relatively unclear just what 'interactivity' and 'interactive media' mean" (p185). The buzzword 'interactivity' is now widely being used without a precise meaning defined. This is problematic not only for professionals but for academic scholars. Since interactivity is an interdisciplinary topic as is now, the lack of precision in the meaning can delay or even hamper the academic progress in the work of related areas. For example, in developing digital libraries, the interactivity understood by people in software design may differ from what is conceived by people in library studies or communication scholars who are working together possibly resulting in failure to provide successful outcomes.

As an effort to solve such problems, this paper proposes a new approach in defining and studying interactivity. Various kinds of definitions of interactivity across many fields will be examined and the definitions and the constructs of interactivity will be categorized according to the perspectives underlying them. It is hoped that, by doing so, the characteristics of interactivity and the trends and approaches of the studies of interactivity are more clearly understood. The new approach and a model suggested in this paper is believed to provide a wide range of applicability of the concept and a simplified but still useful way of defining and understanding the interactivity construct. In the following section, the literature review which surveys various definitions and ideas in interactivity research conducted in various academic fields will be presented. Then, a new way of categorizing the definitions and dimensions of interactivity will be suggested.

Literature Review

When reviewing literature on interactivity, one is overwhelmed by the vast amount of explanations provided from both professional and academic perspectives (Kiousis, 1999). Among the large number of researchers who have explored the concept of interactivity, scholars in communication, psychology, computer science, business school, and advertising have been major contributors. Although grouping the scholarly outcomes according to the intellectual perspectives they are based on is common, I will summarize them in terms of the focal points the explanations on interactivity are rooted to for the purpose of this paper. Since most of scholars increasingly agree that interactivity is a multi-faceted and multidimensional concept, and provide many dimensions together with the

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definition to explicate the concept of interactivity, these dimensions will also be presented in this section.

Definitions and Dimensions of Interactivity

Interacting with People

Since Wiener (1948) emphasized the importance of feedback, communication scholars regarded feedback as a key element in developing communication models. In this regard, interactivity has been seen as an attribute of the channel through which the dynamic interdependence between senders and receivers in communication becomes possible (Kiousis, 1999). Thus, Rafaeli (1988) focusing on the concept 'responsiveness' argues that interactivity is "an expression of the extent that, in a given series of communication changes, any third (or later) transmission (or message) is related to the degree to which previous exchanges referred to event earlier transmissions" (p111). Heeter (1989) adopted Rafaeli's uni-dimensional interactivity concept and included responsiveness as one of her six dimensions of interactivity. Williams et al. (1988) suggest that "the degree to which participants in a communication process have 'control' over, and can 'exchange roles' in, their 'mutual discourse' is called interactivity" (p10). Shaw et al. (1993) indicate that there exists a hierarchical relationship among the three components and, thus, interactivity is a relative phenomenon with many gradations and levels. As they seem, these definitions see the flow of feedback between senders and receivers are acquired by messages exchanged and the relationship of the messages as a key element of interactivity. The applicability of these definitions to the real world situations is limited because focusing on the message relationship and some aspects of face-to-face (FtF) communication overlooks the important technological characteristics of new communication environment such as computer-mediated communication. However, by examining content of interactive media and trying to link it to psychological and behavioral attributes of users, this line of research (Rafaeli, 1986; Rafaeli & LaRose, 1993) contributed to the future development of conceptual models of interactivity.

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Scholars have regarded increasing interactivity as providing FtF-like communication. Laurel (1991) argues that theater is the promising foundation for designing human-computer experiences and interactivity is an experience like acting in a theater. Laurel also contends that frequency (how often you could interact), range (how many choices are available), and significance (how much the choices really affect matters) are the three characteristics of interactivity. DeVries (1989) identifies distant learners' engagement in a form of personal involvement as the gist of the interactivity in distance education. One of the characteristics of this line of research is that FtF communication is regraded as the standard of interactivity. Thus, in evaluating mediated communication in new communication technologies, scholars measure how closely the mediated communication simulates FtF communication (Walther & Burgoon, 1992).

Attempts have been made to apply existing communication models to the study of interactivity. For instance, Bordewijk and van Kaam's (1986) four-part typology of information model has been applied to defining interactivity. The key element of the model is control and 'control of information source' and 'control of time and choice subject' are the two main factors of the typology. McQuail (1994) borrowed Bordewijk and van Kaam's idea and further developed the model. McQuail suggests that based on whether the two types of control reside in a central source or with the individual, 'allocution (transmission)', 'registration', 'consultation' and 'conversation' could be defined. Among these, 'allocution (transmission)' is closely related to many mass media and 'conversation' is more like interpersonal communication. Jensen (1998) applies this concept in defining four types of interactivity in computer-mediated environment. He defines interactivity as "a measure of a media's potential ability to let the user exert an influence on the content and/or form of the mediated communication" (p201). According to Jensen, a communication pattern of the 'transmission' type can be found in TV and real time radio, and the 'conversation' type in email and Internet Relay Chat (IRC). Jensen applies these four types of interactivity to explaining the definitions of interactivity suggested by others. For instance, Jensen argues that Rafaeli's (1988) responsiveness and the concept of interactivity primarily refer to 'registration' communication which features information produced by the consumer and distribution controlled by a central provider. Ha and James (1998) point out the invalid assumption of 'exchange' and 'mutuality' as the key elements of interactivity when applied to CMC context. Thus, they propose interactivity as "the extent to which the communicator and the audience respond to, or are willing to facilitate, each other's communication needs" (p462) and suggest playfulness, choice, connectedness, information collection and reciprocal communication as the five dimensions of interactivity in CMC.

Although communication scholars may have provided major contribution to conceptualization of interactivity, research from other intellectual discourse also enhanced the understanding of the concept. Haeckel (1998) provides an understanding of how interactivity is seen in business schools. He presents ample definitions of interactivity from attendees at the May 1996 Harvard Business School Conference on Marketing Interactivity. Some examples are "a two-way dynamic dialogue", "person-to-person communication permitting feedback", and "an exchange between two entities that changes the state of at least one of them". Day (1998) argues that "the essence of interactive marketing is the use of information *from* the customer rather than *about* the customer" (p47) pointing out the importance of mutual, two-way communication. In the interactive marketing perspective, the focus lies in establishing communication (with people) to create compelling consumer experiences. Zack (1993) explicates the importance of managers' use of electronic messaging for ongoing management groups performing a cooperative task. He identifies four interactivity dimensions, 'simultaneous and continuous exchange of information', 'use of multiple, non-verbal cues', 'potentially spontaneous, unpredictable and emergent progression of remarks', and 'ability to interrupt or preempt'. In evaluating the interactivity of electronic messaging, he sets face-to-face communication as a consummation of interactivity.

Other academic fields such as Sociology and Psychology have also been playing important roles in developing conceptual model of interactivity. Turkle (1984) sees interactivity as interpersonal and humanistic variable and Leary (1990) compares the evolution of interactivity with the development of interpersonal in psychology. Whilst sociology studies have not directly approached the concept of interactivity, we can glean useful insights into interactivity from the sociological meaning of 'interaction'. As Jackel (1995, cited in Jensen, 1998), among others, points out, the concept 'interactivity' stems

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from the concept of 'interaction'. Duncan (1989) noting interaction as a state of reciprocal awareness describes, "... according to sociology, interaction makes up a basic constitute of society" (p326). Jensen (1988) notes that "the basic model that the sociological interaction concept stems from is thus the relationship between two or more people who, in a given situation, mutually adapt their behavior and actions to each other" (p188).

Various attempts on defining interactivity from many academic fields have been introduced in this section. Although the emphases the studies have made may not overlap each other, it can be argued that the basic concept of the definitions has been 'relationship'. Starting from Rafaeli's (1988) message relationship, the focus of these interactivity studies has gradually migrated to the relationship between/among people. Thus, interactivity has been seen something that affects the relationship between/among people in certain communication environments.

Interacting with Technology

There has been another approach to studying interactivity which focuses on media's technological features. In fact, as the development of new communication technologies such as computers and the Internet, more focus has been given to this line of interactivity studies. Scholars in computer science and design have contributed to much of the work. Kearsley & Halley (1986) describe that "Almost all programs developed today are interactive to some degree (exceptions are certain sales demos, process control programs, and utilities). Any program that requires user input is by definition, an interactive program" (p13). Viewing interactivity as any kind of user input, they tried to analyze interactivity in terms of the type of user response involved. This attempt is common in computer science studies in that a user is considered only as a mechanism involved in an interactive communication with computer/medium. Similarly, as one can imagine, human-computer relationship is central in human-computer interaction (HCI) studies. For instance, Jensen (1998) reports that the style of control that exists between the human and the computer has been the key determinant of interactivity in the field of human-computer interfaces.

Similar conceptions have been suggested by the studies of virtual reality. Sheridan (1992) included three technological factors in identifying five variables that help induce a sense of telepresence. Steuer (1992) defines interactivity as "the degree to which users of a medium can influence the form or content of the mediated environment" (p80) and identifies 'interactivity' and 'vividness' as determinants of telepresence. Steuer's three dimension of interactivity are 'speed', 'range' and 'mapping', which are all technological elements. Goertz (1995, cited in Jensen, 1998) identifies four dimensions of interactivity; the degree of choices available, the degree of modifiability, the quantitative number of the selections and modifications available, and the degree of linearity. Bezjian-Avery et al. (1998) argue that "interactivity is fundamentally the ability to control information" (p24) and propose that while information flow in traditional advertizing is linear, that of interactive system is non-linear (e.g., circular, networked, etc.). In a similar vein, professionals often regard interactive media as "mechanisms for delivering image, text and sound data in which the user interacts with the database" (Hutheesing, 1993, p244). Likewise, Klein (2000) views bandwidth as a key element of acquiring interactivity.

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Different from the studies introduced in the last section, the definitions provided in this part focus on technological aspects of interactivity. In other words, the interplay between a user and the technology (or medium) has been of interest. Although this line of research is vulnerable to the criticism that the definitions are based on a technology deterministic approach, it cannot be denied that they have made good contributions to the study of interactivity by including some of the important characteristics of new technologies, which other research has overlooked. So far, two main approaches in studying interactivity have been introduced. In the next section, an important problem in studies of interactivity will be discussed.

Problem of Interactivity Definitions/Dimensions

An important problem prevalent in the interactivity studies is that while some of the definitions and/or dimensions of interactivity have centered on *interaction between/among people* or *between a person and technology (machine/medium)*, others embraced elements of the two types of interaction in their interactivity concept without properly recognizing the difference among them. For instance, Heeter (1989) suggests six dimensions of interactivity which include responsiveness to the user, facilitation of interpersonal communication, complexity of choice available, effort users must exert, monitoring information use, and ease of adding information. As one can realize, the dimensions consist of attributes of two different types of interaction; between/among people and between a person and technology. The first two are attributes of interaction with people and the rest four are attributes of interaction with machine/medium.

Massey (1999) modified Heeter's idea and applied five dimensions of interactivity in measuring interactivity of online newspaper web sites. Massey's interactivity dimensions also consist of the two types of interaction as specified above. Similarly, Haeckel's (1998) nine dimensions of interactivity (impact of interaction, number of entities involved, degree of contingency, frequency of exchange, degree of sensory involvement, degree of cognitive involvement, types of entities involved, content being exchanged, degree of synchronicity, and type of media involved) are mixed with the two types of attributes. Morrison's (1998) three emerged dimensions of interactivity out of focus group interviews are exchange/feedback, activity on the part of user, and sensory input. Although exchange/feedback can be specified as an attribute of both human interaction and man-machine interaction, the rest two are clearly describing man-machine interaction. So far, it has been shown that many interactivity dimensions suggested by researchers consist of attributes of both human-human interaction and human- machine/medium interaction. This unintended mix-up of different types of dimensions can be misleading for the development of the conceptual framework of interactivity.

The review of interactivity studies in this paper is deliberately organized as what it is to illustrate that the definitions and dimensions of interactivity so far suggested could be divided into two types based on the interaction they are implicitly/explicitly focused on. Interactivity definitions summarized in the first part are more related to the interaction among/between people. Rafaeli's (1988) 'responsiveness' is connected to the relationship of message content exchanged *among people* online. Heeter's (1989) interactivity dimension 'facilitation of interpersonal communication' and William et al.'s (1988) 'mutual discourse'

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are other examples of such kind. On the other hand, Steuer's (1992) 'speed', 'range' and 'mapping' are typical examples focused on interaction with machines. Of course some dimensions such as feedback are applicable to both types of interaction.

As one can realize, there has been little effort to classify the two different types of interaction/interactivity because the difference has been largely unnoticed by the researchers studying interactivity. This is part of the reason why we do not possess agreed and coherent definitions/dimensions of interactivity today. In other words, disguised by the attributes/dimensions of interactivity which are concurrently pertinent to both types of interactivity, the majority of people have failed to perceive the different types of interactivity. In studying interactivity, one must realize the existence of as well as the difference between the two types of interactivity and should classify the dimensions based on the type of interactivity. In application, the proper type of interactivity should be used to explain the communication situation. Otherwise, mismatching of the definition and dimensions of interactivity only produces confusion and leads to a failure to properly measure the interactivity of interest. That is why Rafaeli's (1988) responsiveness is not applicable to interaction with computers and Steuer's (1992) concept of speed, range and mapping is difficult to be employed to measure interpersonal interactivity. It will be even more problematic if different types of interactivity dimensions are adopted to measure a certain type of interactivity.

For instance, part of the reason that Massey (1999) had to drop out two of Heeter's interactivity dimensions 'effort users must exert' and 'monitoring information use' could be attributed to the fact that the two dimensions were not applicable when analyzing interactivity of online journalism, which was basically interpersonal interactivity. In some cases, a researcher may be interested in analyzing the two types of interactivity together. For instance, if the researcher is trying to compare interactivity of web sites where the web sites feature functions facilitating the two types of interactivity, s/he may want to implement Heeter's six dimensions to measure the level of interactivity[1]. However it is needed to divide the dimensions properly into two categories and apply each of them to the measurement of either person-to-person or person-to-machine interactivity accordingly.

Classifying Interactivity

Rice (1984) defines new media as communication technologies "that allow or facilitate interactivity among users or between users and information" (p35). Carey (1989, p328) also identifies that (interactive media are) "technologies that provide person-to-person communications mediated by a telecommunications channel (e.g., a telephone call) and person-to-machine interactions that simulate an interpersonal exchange (e.g., an electronic banking transaction)". Szuprowicz (1995) presents a two-dimensional concept of interactivity. 'Information flow' is one of the two dimensions and he divides the information flows into three main categories; user-to-documents, user-to-computer and user-to-user. 'User-to-document' interactivity is defined as "traditional transactions between a user and specific documents" and 'user-to-computer' interactivity as "more exploratory interactions between a user and various delivery platforms". 'User-to-user' interactivity is explained as "collaborative transactions between tow or more users" (p14).

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Jensen (1998) points out that (Szprowicz's) "user-to-user interaction is related to the sociological concept of interaction, user-to-computer interaction is related to the informatic concept of interaction, while user-to-documents interaction has an affinity to the interaction concepts used by communication studies" (p196). Although Szprowicz provides ample descriptions of different kinds of interactivity, the lack of precise distinction between 'user-to-documents' and 'user-to-computer' interactivity requires further elaboration of the idea. Jensen argues that Szprowicz's differentiation between user-to-documents and user-to-computer is relatively unclear; "In most specific cases, it would be difficult to determine whether the 'interactivity' is directed toward a document or toward a platform. The very formulation of the difference appears to refer mostly to the 'degree of manipulability' rather than an actual qualitative difference. This is why the difference is difficult to handle in practice-and to maintain in theory" (p196).

Although Carey and Szprowicz's descriptions fail to provide successful distinctions between/among the different kinds of interactivity, we can glean useful ideas from their arguments. That is, Carey's person-to-person interaction is comparable to Szprowicz's user-to-user interactivity. Massey (1999) analysed online journalism with two types of interactivity; content interactivity and interpersonal interactivity. The two types are parallel to Szprowicz's user-to-computer and user-to-user interactivity respectively. Since Carey includes media content in 'person-to-machine' interaction, the 'person-to-machine' interaction incorporates 'user-to-documents' and 'user-to-computer' interaction. The terms 'person-to-machine' and 'user-to-computer', however, restrict their applicability only to situations like computer-mediated communication (CMC). Thus, to encompass wider range of situations and media in applying the concept of interactivity, these interactions will be called 'user-user' and 'user-medium' interaction/interactivity instead of using the term computer or machine (see fig. 1).

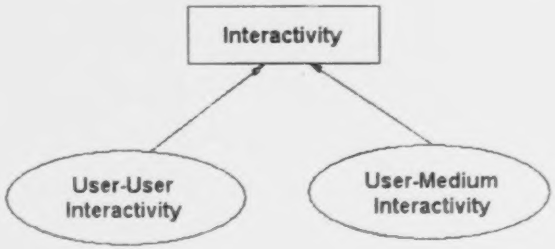

Figure 1 Two types of interactivity

It was explained so far that there exist two kinds of interactivity and researchers have failed to notice the difference of the two types of interactivity. The next step is providing a new definition and developing a conceptual model of interactivity based on the definition. Before doing that however it is needed to examine how the definitions and dimensions of interactivity have been applied to measure the level of interactivity in prior research and to discuss the problems behind it. Then, a new approach will be suggested and the implications and the practical meanings of the approach will be discussed.

Measuring Interactivity

Although ample definitions and dimensions of interactivity have been suggested by many researchers, only a small number of attempts to measure interactivity have been made. Part of the reason is that the concept of interactivity is difficult to operationalize.

Also, as explained in the previous section, failure to properly organize the dimensions of interactivity has prevented scholars from making advancement in gauging interactivity. Among the few, Rafaeli was the first who conducted a number of such studies (see Rafaeli, 1988; Rafaeli & LaRose, 1993; Rafaeli & Sudweeks, 1997) in which he examined the relationship among message threads based on his concept 'responsiveness'. As interactivity was seen as a multidimensional and multi-faceted concept, the operationalization of the dimensions became more difficult to implement. The interactivity dimensions are not exclusive and often overlap each other.

For example, Jansen (1998) criticizes that Heeter's (1989) six dimensions of interactivity are overlapping each other and the high degree of complexity makes it difficult to deal with the concept on a practical basis. Massey (1999) adapted Heeter's concept and operationalized five dimensions of interactivity to measure the interactivity of newspaper web sites. Each site was coded according to the presence of various types of contents and technological features. One of the findings is particularly remarkable here. He suggests that, since a fairly sizable online staffs are needed to be fully interactive with readers, there is a likely relationship between an online newspaper's level of interactivity and the number of staffs responsible for the web site. This is in line with the argument that there exist two kinds of interactivity; user-user and user-medium interactivity. One way of interacting with users is via answering the email from users or posting answers to, if any, the bulletin board thus constituting user-user interactivity. Coding primarily based on technological features can not capture all the aspects of interactivity because then it may be measuring only user-medium interactivity.

Similarly, Schultz (1999) conducted a content analysis of 100 U.S. online newspapers in which the availability of email, chat rooms, online polls and surveys, and online forums are operationalized as the interactivity constituents. Since he believed that interactive communication was possible only among/between people and machines simply mediated the communication, only the availability of options that facilitated interpersonal communication was examined. Ha and James (1998) conducted a content analysis of 110 business web sites. They operationalized five dimensions of interactivity in much the same way as Massey and Schultz did. On the other hand, Shaw et al.'s (1993) experiment quantified the effect of computer mediated interactivity on idea generation exclusively based on interaction with computers (user-medium interactivity). However they did not measure the level of interactivity, rather it was assumed that the provision of navigation buttons and relevant information increased interactivity. Each of the three programs differing the level of interactivity was implemented for one of the three treatment groups and the quality of ideas generated was evaluated. The hypothesis was that the program of higher level of interactivity would help generate better ideas. However, they failed to support the hypotheses that interactivity has positive effects on idea generation. Each regression R2 acquired was less than 0.09.

As one can realize, most studies that have tried to measure interactivity looked at only one medium such as computers leaving the variant characteristic of interactivity across media unexamined. For instance, the comparison of the level of interactivity across media has not been attempted yet. One crucial shortcoming of those studies is that interactivity is thought to be invariant across people. In other words, the researchers seem to believe that the level of interactivity can be set objectively only if certain functionalities are available in the medium. This is more like technological determinism and leaves much room for argument. The experience of interactivity is variant across people and without measuring how people perceive the interactivity, it is difficult to understand the essence of interactivity. Part of the reason that Shaw et al. (1993) fail to find significant relationship between interactivity and idea generation could be attributed to the fact that the researchers believe what they think interactive is the same as what the participants perceive to be interactive.

The mere fact that a web site provides many communication options to users does not guarantee a high level of interactivity of the site. For instance, it is reported that editors of newscast do not even look at emails from their audience although they explicitly encourage people to do so (Newhagen, Cordes, & Levy, 1995). We can easily imagine even a worse situation where the increased number of options that enable communication between users and online staffs undermine the interactivity because of the communication overload the staffs experience. Similarly, a large number of choice options put toward users can make them overwhelmed. It is conceivable that, to a certain degree, the enhanced functionality and the increased number of choices can lead users to experience high level of interactivity. The problem is that a threshold may exist in such cases and, after the threshold, the level of interactivity can become degraded. Since the threshold is variant across people, researchers are unable to precisely predict which is more interactive than others.

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Fulfilling interactive communication does not depend on what people can do but what people want to do. Light & Rogers (1999) discover that many users are reluctant to participate in the online forums due to lack of time. To them, the provision of an option to participate in an online forum has little to do with their experience of interactive communication. Similarly, Scife and Rogers (1996) argue that a long line of assumptions about graphical technological advancements such as graphical representation is better than textual representation and animated diagrams are more effective than static images have not been fully validated. McMillan (1999) suggests that the research on interactivity should focus more on perceptions of interactivity rather than on specific component of a site. Different from other research, Newhagen et al. (1995) and Bucy & Newhagen (1999) try to measure 'perceived interactivity'. McMillan's (1999) approach toward measuring the level of interactivity is promising in that she conducted a content analysis of selected web sites and asked the participants to evaluate the sites in terms of interactivity. By comparing the result of the content analysis with user evaluations, she could find useful insights abut the relationship between the two.

In summary, previous research clearly shows that the most important thing to be examined in measuring the level of interactivity is not counting mere provision of technological features but investigating how users perceive/experience. User perception of interactivity is the key variable to be examined. Despite the importance of user perception of interactivity, research focusing on user perception has been rare. In the following section, a new interactivity definition and a new conceptual model which incorporates user perception as a key variable will be introduced.

A New Approach

In the mediated communication environment, user-user interaction is the interaction between/among people through mediated communication. User-user interaction occurs in online chat, MOO, newsgroup, bulletin board, etc. User-medium interaction is the interaction between a user and a medium (e.g., machine, computer, etc) and from the computer science perspective this interaction becomes Human Computer Interaction (HCI). It becomes now clear that when defining interactivity the definition should encompass both the two types of interaction. Otherwise, the definition inherently becomes applicable only to limited situations.

From the perspective of this paper, interactivity is defined as *something that changes according to the user's input*. This definition is relatively simple compared with other definitions but it is believed that Thurstone's (1947) concept of simple structure is also applicable here. The definition implies many interactivity dimensions such as change, feedback and control. However since it does not restrict the type of communicating partner, the definition is applicable to both user-user and user-medium interactivity. Technological requirements such as speed, synchronicity, number of options are not implied in it. The central idea of the definition is that, to be interactive, changes should be made in accordance with user's intension. Changes in the wrong direction cannot be interactive.

Rafaeli (1988) argues that depending on how much one message in an exchange is based on previous messages, all messages which do not differ in terms of technological background can be categorized into 'two-way', 'reactive' and 'interactive'. This is an example in which a non-technological factor becomes the determinant of interactivity. Morrison (1998) argues that "Interactivity is a fluid concept, one that is influenced by the technology with which the consumer is familiar" (p153) pointing out the fact that users and non-users of computer technologies see interactivity differently. For instance, the level of exposure to a medium affects its interactivity.

One of the main characteristics of a communication medium is its 'networkness'. Most communication technologies whether new or old (e.g., mail, telephone, TV, radio, cable, PCS and the Internet) are running on networks. From the 'critical mass' perspective (Allen, 1990; Markus, 1990), the likelihood of individuals' adopting a new interactive medium depends on the number of current and potential users of that medium in those individuals' communication network. Markus (1990) specifies that if a new interactive medium fails to achieve universal access, it cannot become truly interactive. Diffusion theory (Rogers, 1995) also shares this interdependency of individuals' technology adoption. Similarly, in an organizational setting, how the technology is used and how the organization is structured becomes an interactive process rather than one that is determined by the factors of the technology (Salzman & Rosenthal, 1994, p24).

The dependence of technologies with communication environment is manifested in social presence model and the exploration to the concept of interactivity can borrow useful insights from the social information processing perspective. Different from social presence perspective, studies of 'media richness' which is defined as those providing multiple channels, the capacity to transmit natural languages, message personalization and the capacity for immediate feedback (Daft et al., 1987), argues CMC is inherently less rich than

FtF. Although media richness has seen to be determined by technological factors, research suggests that richness is not an invariant characteristic and social factors affect individuals' perception of media richness (e.g., Fulk and Boyd, 1991; Schmitz and Fulk, 1991; Walter & Burgoon, 1992). For example, persons with more electronic mail experience and training rated electronic mail as richer than those without such experience and training (Fulk et al., 1990). Short et al. (1976) identify that social presence is the degree to which the medium facilitates awareness of the other person and interpersonal relationship during the interaction.

Interactivity construct is very similar to that of media richness. They are technology-oriented concepts but still non-technological factors can influence them. Sitkin et al. (1992) posit that communication media exhibit two independent channel capacities, one to transmit data and the other to transmit meaning. The first is relatively invariant characteristic while the second varies according to communication content and situation. Similarly, it can be drawn that user-user interactivity and user-medium interactivity in mediated environments are related with technologies and affect users' perception of interactivity in a relatively stable manner. However according to communication context and environmental settings, users can perceive the interactivity of a medium differently. Based on the arguments made so far a new conceptual model of interactivity is summarized in figure 2.

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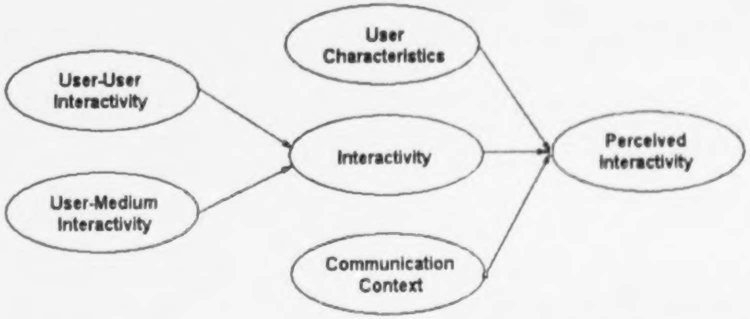

Figure 2 A new interactivity model

The model portrayed in figure 2 suggests that users perceive interactivity differently depending on user-user interactivity, user-medium interactivity, user characteristics and communication context they are in. User characteristic variable is included in the model since it is well conceivable that the perception can vary across people. This model is radically different from others in that it suggests that 1) there exist two kinds of interactivity 2) communication context and user characteristics plays important roles 3) measuring interactivity without considering user perception is incomplete, and 4) user perception of interactivity is affected by the two kinds of interactivity, user characteristics and communication context.

Conclusion

This paper reviewed various approaches of interactivity studies and summarized the ample definitions and dimensions of interactivity suggested by researchers. With a close examination of the literature, it is revealed that there exist two types of interactivity and the difference between the two has been largely unnoticed. User-user interactivity is the ability of medium to support recursive communication between/among people and the medium is only acting as the communication channel. User-medium ability is related with the medium's responsiveness to users' actions. It is argued that researchers' failure to properly distinct the difference between the two has led to the current confusion prevailed in interactivity studies. Previous research that tried to gauge interactivity have overlooked to include some other important variables. User perception and communication context were suggested as important factors in understanding and measuring interactivity. Based on the arguments made in this paper, a new definition of interactivity has been suggested and a conceptual model has been developed. The new model suggests that user perception is the key element in studying interactivity. The model is much different from previously suggested models in many aspects and casts future research directions. For instance, in the study of computer interface, programmers and designers should survey how users perceive the interactivity of the interface and examine which features make whom experience interactive communication in what circumstances. For academic research, scales measuring user perception of interactivity should be developed and tested. One important thing in studying perception of interactivity is that user perception is not invariant. For example, as a certain medium/technology is introduced and users get experience of it, the perception can be changed. In this regard, time can be an important factor of the user perception. Until now, most researchers have tried to measure interactivity of media directly. However, the model emphasizes that what is important is not the objectively measurable interactivity but the relationship among the variables depicted in the model. It is hoped that the model can aid to understand the construct of interactivity and guide the future research.

Note

[1] For the purpose of illustration, Heeter's six dimensions are assumed to be valid here although some of them have been criticized to be impractical for implementation.

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Predicting Online Use Activity via Motives, Innovative Traits and News Media Use

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Abstract

As the 20th century comes to a close, the online industry has taken on a completely different economic as well as social status. The online medium, as a cross-breed of communication technologies, embodies a medium that offers the optimal and perhaps even maximal human communication channel functions. This study intends to address the Internet use activity as a phenomenon where users are set out to get on line with a set of communication motives much like the way they approach other "older" communication media such as the traditional electronic and print media. In particular, the study differentiates Internet user motives between their quantity of online access frequency and the breadth of online content access activity.

Predicting Online Use Activity via Motives, Innovative Traits and News Media Use

As the 20th century comes to a close, the Internet industry has taken on a completely different economic as well as social status. While Microsoft and Intel have both recently been added to the Dow Jones Industrial Index (as of November 1, 1999), this development signifies a new era where information technology has been "officially" recognized as one of the most important industrial sectors in our economy. The evidence of this phenomenon is visible on a daily basis, when various public, nonprofit, and commercial establishments advise us to contact them on line to conduct information exchange, communication or commercial transactions.

At a societal level, today's Internet scene has emerged as the most fertile ground where the human communication concept is being rethought and its dynamics redefined. The Internet, as a cross-breed of communication technologies, embodies a medium that offers the optimal and perhaps even maximal communication channel functions, in addition to being a potentially comprehensive interactive encyclopedia of information and content. Even so, the mass communication literature on Internet adoption and uses in still it its nascent stage and remains mostly descriptive in nature.

The present study intends to address online use activity as a phenomenon, where users set out to get on line with a set of communication motives, much like the way they approach such other "older" communication channels as the traditional electronic and print media. In particular, the study differentiates an online user's motives between the frequency and breadth of their online access activity. It also considers a set of online user personality traits, news media use habits and demographic factor s that influence different online access patterns.

Literature Review

Amidst the mass communication research literature on the subject, there are several recognizable traditions slowly emerging. Amongst these traditions, the more established theoretical paradigms include the uses and gratifications perspective and the diffusion theory. Expanding on these two paradigms, the present study integrates both explanatory and descriptive measures to further our understanding of the subject at hand.

Online Access Motives

According to the uses and gratifications perspective, audiences for the most part, are engaged in a conscious effort to fulfill certain psychological needs or gratification-expectations when consuming media. These "needs" or "gratification-expectations" could include the motives for seeking surveillance, information learning, entertainment, personal identity, parasocial interaction, companionship and escape (e.g. Blumler 1979; Katz, Blumler & Gurevitch 1974; Rubin, 1981; 1983). According to Rubin (1984), such motives may be instrumentally or ritualistically oriented--i.e., more content- or more medium-centered.

In particular, the distinction between instrumental and ritualized needs and gratifications is an important one, as each of these separate set of needs and gratification-expectations help explain a different type of media use behavior. As indicated in past studies, "content-centered" TV viewing behavior is typically tied to instrumental motives that are more goal- or utility-directed--such as surveillance, information learning or interpersonal communication (e.g., Rubin & Perse, 1987). Yet, "medium-centered" TV viewing behavior is generally prompted by ritualized motives that are more diffused or diversion-driven--such as entertainment, escape or habit (e.g., Perse & Rubin, 1988). However, this motivational divide between "rational" (or instrumental) and "emotional" (or ritualized) orientation may be less clear cut then first thought.

That is, while some viewers approach TV viewing solely with ritualized motives, others are motivated by both ritualized as well as instrumental motives (Lin, 1993). This suggests that TV viewing is intrinsically a "leisure" activity by nature, as viewers who seek information utilities from TV content also pursue the "infotainment" values inherent to such content.

By comparison, the process of online access appears to resemble the traditional media use process in a multimedia environment a great deal, except for those interactive services that are unique to the Internet such as news groups, e-mail, etc. This is because most popular online services are a repository for traditional print and electronic media content--including news, entertainment, weather, sports, stock quotes, retail advertising, etc. And, as much of the online use activity involves browsing (or surfing), online browsing is similar to TV channel surfing--which is likewise undertaken to browse the medium's content offerings (e.g. Heeter, 1985). Nevertheless, online browsing entails much greater user cognitive involvement, relative to TV channel surfing, due to the constant demands put on the user to simultaneously point, click, comprehend and select the hypertext links.

This similarity between the online and traditional media use process also exists between online and media use motives, as shown by the limited empirical evidence. For instance, James, Wotring and Forrest (1995) found that informational learning and socialization were the two most frequently cited motives for electronic bulletin board use. Jeffres and Atkin (1996) discovered that attitudinal variables, particularly those addressing the needs for communication (e.g. home shopping) served by computer technology, were predictive of Internet adoption intentions.

An industry study also reported that Internet enthusiasts sought escape, entertainment, social interaction and surveillance gratifications when they went on line (Miller, 1996). Eighmey

(1997), in a similar vein, reported that the entertainment value of the world wide web and personal involvement and relevance as to the content accessible on the web are potent predictors for commercial web site adoption. By the same token, Pradeep and Wolin's (1999) findings suggest that social escapism, information, interactive control, socialization and economic motives are discriminated along heavier and lighter online usage. Lin (1999) also provided empirical support for the validity of this theoretical paradigm to date, finding entertainment, surveillance, escape/companionship/identity as strong predictors for online service adoption likelihood.

It seems clear that the initial academic and industry research evidence supports the theoretical parallel between traditional and online media use motives. Hence, it is logical to assume that online use motives may also be conceptually differentiated between instrumental vs. ritualized orientations in the same way that they are distinguished for traditional media use. As there is no research literature to validate this theoretical assumption to date, the following discussion will explicate this assumption in light of different online access patterns.

Online Access Activity

A recent industry survey reported that the number of individuals aged 16 and over accessing the Internet reached 92 million in the U.S. and Canada (as of April of 1999), indicating a net increase of 8 million individuals over a period of 9 months (CommerceNet, 1999). Market research addressing online access content generally profiles the following. Online users appear to tap primarily nonoverlapped content features between the online and traditional media, as the use of any redundancy between the two was limited, and typically involved news-seeking. For instance, one national survey (Jessell, 1995) found that, while 53% of the online users sent e-mail, 41% conducted research (or communicated with colleagues), 30% sought news, 23%

participated in discussion/chat groups, 19% accessed entertainment information, 14% gathered financial information and 7% played games--at least one day per week. Another study reports that 96% of online users used e-mail, 51% looked up news items, 40% visited music sites, 45% participated in chat rooms, 37% checked stock quotes, 17% gathered financial information and 38% played interactive games--at least once a month (Peterson, 1999).

Examining the online use activity from an age segmentation approach, a national survey (Miller, 1996) concluded that "older" online users (i.e., babyboomers or older generation X'ers) primarily utilized Internet services for broader and varied purposes; by contrast, their younger counterparts narrowly pursued offerings unique to the Internet. Specifically, while the former typically used the Internet to search for information on education and training, health and medicine, financial investment and customer services, the latter were more likely to use music and entertainment or download photos, video clips and music clips. Older users also were the heaviest online shoppers (due to their higher income level), and most likely to book travel reservations as well as buy food--through selected personal shopper, retailer or restaurant Web-sites (Cavanaugh, 1996).

Given these various segmentation profiles, it is reasonable to assume that, among the regular online service users, there may be two basic types of access patterns. The first access pattern is practiced by those users who access a narrow or limited set of unique online service categories with high frequency. As online users in general have not displaced their traditional media use with online access (Snider, 1997), it could be argued that this type of online use pattern signifies a heavy reliance on the medium itself to obtain the content that is uniquely available online. This scenario then is similar to heavy TV viewing, where only TV can provide certain unique contents that the viewer desires. As such, this type of access pattern can also be conceptualized as "medium-centered" in the same way we consider heavy TV viewing as a "medium-centered" activity.

Users that fall under this use category may be those who are heavy and regular users in selective online categories that offer unique web-centered service content--such as online alternative music sites, video game programs or e-mail service and the like. These users may also be those who develop a habitual pattern of online access, in much the same way that a heavy TV viewer establishes a routine of viewing selective programs. Based on the media/online use motive discussion above, this type of "medium-centered" access pattern may be motivated by a narrower range of use motives that are more diffused or diversion-oriented. Hence, it can be hypothesized that users who target high online access frequency may be motivated by more ritualized motives that tend to manifest themselves through a more habitual orientation.

Alternatively, the primary objective of the second online use pattern may be to access a broader range of online service categories. This type of online user hence seeks "variety access." Thus, a user who engages in a more diversified online content access pattern may seek such service categories as--news headlines, weather, sports scoreboard, movie listing, stock market updates, health tips, e-mail, etc. This type of online use then is similar to the TV viewing pattern which includes a broader channel repertoire to obtain both information- as well as diversion-oriented content.

As discussed above, while the entertainment or diversion value of TV use is innate to the TV medium itself, the same is true for the online medium. As most online content is available through other media or archival outlets, online information searches may contain a dimension of "infotainment" value as well. In essence, online users who aim to acquire a diversified content access experience may be regarded as "utilitarian" in their use orientation, in addition to adhering to the inherent "diversion" orientation of the online use activity. Based on this theoretical reasoning, it can be postulated that this type of "variety-access" pattern can be perceived as more "utility-centered" but are motivated by both instrumental as well as ritualized motives.

It is of course entirely possible that a group of online users possesses both styles of online access patterns. Realistically, this group of online users will be in a very small minority, as our leisure time is of fixed avail. This is validated by a recent industry study that reports on online use patterns. According to the study findings, while the "new" online users generally search more different sites with short bursts-- and the majority of "experienced" online users primarily visit their bookmarked or "predesignated" sites--online "junkies" visit very few sites but with much greater frequency and more extended duration (Peters, 1999).

Online Access Experience and User Demographics

Empirical evidence has shown that those who are newly online tend to conduct quick browsing of a wider range of service categories for surveying purposes, as compared to long-time users, who are more likely to spend a more extended period of time looking up their favorite sites (e.g., Weber, 1996). According to a study conducted by a web-audience measurement firm (Petersen, 1999), while "newbies" (who have been on line for less than a year) spend 1.1 hours less on line per week than "intermediates" (who have been on line between one and two years), they also spend 2.8 hours less on line than "veterans" (who have been on line for more than two years). It is not surprising that less-experienced users will spend less time on line, as they could easily give up while trying to sort through the tangled "web" of the web world. These new users may also only get limited utilities or enjoyment from their early access attempts, as frustration mounts due to their inability to successfully "maneuver" in the web environment. As an online user grows in experience and becomes a more "matured" online player, s/he may then settle on an access pattern that can comprise of a set of bookmarked sites and/or regularly accessed service features (e.g., Petersen, 1999). Thus, it is logical to posit that this "stable" pattern can lead to a higher access frequency or a broader content access pattern.

Even though newer and older users spend different amount of time accessing different types of services on line, they do appear to share one thing in common. That is, the majority of them spend their time online from home more than any other location. As "home base" is considered the most popular site for accessing the Internet, these home users represent about 69% of the online users and 37% of all online users get online exclusively from home, according to an industry study (Miller, 1996). Therefore, it is reasonable to assume that home online access capability may help facilitate a higher access frequency or a broader access content access pattern.

Online access from home requires personal computer ownership. As personal computer ownership will soon pass 50% of the U.S. households, this penetration ratio also signals a leveling effect of the online user demographics to include an increasingly large number of middle-class households. But by and large, Internet users thus far continue to be a rather homogeneous and somewhat diverse group of people who share some interests in using computer-mediated communication technology for various purposes (Miller, 1996). For instance, most of them are more affluent or better educated than average; and even though there are more males than females on line, this gender gap appears to be closing. Only age remains a discriminating demographic attribute, as nearly three-quarters of the online users are below age 44 and just over half of them are below age 35 (Nielsen Media, 1998). This indicates a demographic profile primarily consisting of the babyboomer generation and generation X'ers.

Innovativeness Attributes

The basic tenor of diffusion theory describes how a set of personality traits--such as risk-taking tendency, venturesomeness and receptivity to new ideas (Foxall & Bhate, 1991; Midgely & Dowling)--may help prompt an individual to actualize their novelty-seeking nature by making an independent innovation adoption decision (Flavell, 1977). Even though the diffusion theory has not been widely applied to the study of Internet use, early research findings on computer-mediated communication (CMC) technology adoption do provide a strong support for this theoretical approach.

Most of these CMC technology adoption studies were conducted within an organizational communication context where the innovation adoption process is studied by ways of examining the attributes of the innovation itself. These attributes, according to Rogers (1995), include relative advantage, compatibility, complexity, trialability and observability. For instance, variables such as "ease of use" and "usefulness" are considered important measures that reflect innovation adoption decision-making process related to computer use intentions (Davis, Bagozzi & Warshaw, 1989; Trevino & Webster, 1992). In addition, variables such as perceived relative advantage, available resources and an individual's innovativeness needs are all found to be significant predictors for home personal computer adoption (Lin, 1998).

As little empirical literature is available to explain the role of an individual's innovativeness traits in his or her innovation adoption process and decision-making, the concept of adopter categories--including innovators, early adopters, early majority, late majority and laggards--as conceived by Rogers (1995)-- remains largely conceptual and descriptive. Even though Lin (1998) did quantitatively assess the number of individuals falling into each of these five adopter categories based on an "adoption rate" typology, the effort nonetheless is a post-hoc approach based on existing empirical evidence.

Other relevant research addressing the innovativeness traits of individuals remains sketchy. For instance, some organizational communication studies indirectly discuss such innovator attributes as one's attitude toward computer adoption, as these attitudes are found to be strongly predictive of one's success in computer use learning process (e.g., Agrawal & Prasad, 1997; Bagozzi, Davis, & Warshaw, 1992). A separate market research report (MacEvoy, 1994) also supported the notion that change leaders are consumer explorers who possess such personal attributes as novelty-seeking, stimulation-seeking, information-seeking as well as being individualistic, sociable and fashionable. The same article also suggests that these change leaders tend to be relatively quicker in adopting and mastering new technology products.

The strong theoretical backdrop for innovativeness traits, as defined above, is more than adequate for a more thorough empirical exploration of this concept. In fact, computer-mediated communication technology is one of the most appropriate product categories for studying the role of individual innovativeness traits in their adoption. This is because early adopters or active users of computer-mediated communication technology (at a residential setting) often display those personal attributes that resemble those of a "change leader," or are otherwise individuals who are more "innovative" than average in some fashion (MacEvoy, 1994). As online users at this point of the Internet adoption curve are still considered as early adopters, it can be inferred that online adopters with stronger innovativeness traits may also be those who more actively engage in online use activities with either higher access frequency or broader content access.

News Media Use Activity

Most existing academic research literature (e.g., Atkin, Jeffres, & Neuendorf, 1998; Jeffres & Atkin, 1996; Perse & Dunn, 1998) appears to have failed to find any consistent relationship between interest in using Internet services and use of most other traditional mass media. A recent national industry survey provided further support for that literature. The survey results illustrate that percentages of Americans who preferred to go to a movie, watch a video or cable TV, or read a book or magazine--instead of getting on line--ranged from 70% to 77%; among online users, these percentages ranged from 61% to 76% (Snider, 1997).

While some studies did report a minority of Internet users have slightly reduced their television viewing time (e.g. Berniker, 1995; Crispell, 1997); the broader trend seems to be dualistic in nature. In particular, heavier TV users also tend to be heavier online users (Shapiro, 1998). One parallel consumption item between the traditional media and the online medium is in the area of news content, where redundant access of news from a traditional media source, such as newspapers or television (e.g., Jessell, 1995; Shapiro, 1998) occurs frequently. This overlap in news content access between traditional and online media sources seems natural, as news items remain the most sought-after online content category (68% of online users read news, according to one industry study) (Peterson, 1999).

A likely explanation for this type of parallel content consumption may be that the heavier news or information seekers tend to more actively pursue news from various sources--including the Internet--to keep up with current events and happenings. This audience/user nature of staying informed on a regular basis is also in keeping with the attributes of an early technology adopter profile.

Based on the above discussion, the following hypotheses are proposed for this study.

H1a: Ritualistic access motives are positive predictors of higher online access frequency.

H1b: Ritualistic and instrumental access motives are positive predictors of broader online content access.

H2a: Innovative traits are positive predictors of higher online access frequency.

H2b: Innovative traits are positive predictors of broader online content access.

H3a: Online use experience is a positive predictor for higher online access frequency.

H3b: Online use experience is a positive predictor for broader online content access.

H3c: Home online access is a positive predictor for higher online access frequency.

H3d: Home online access is a positive predictor for broader online content access.

H4a: News exposure is a positive predictor for higher online access frequency.

H4b: News exposure is a positive predictor for broader online content access.

Research Methodology

A telephone survey was conducted via a CATI lab in May 1998 to collect data for this study. The telephone sample was randomly selected from random digits and the sampling population resides in a large Midwestern city of 2 million plus population in the metro area. Study data were collected through a three-week period by trained interviewers. The total number of Internet users who provided valid survey data stands at 281. The response rate for this survey is 62%, calculated based on the total number of completed surveys and the valid phone contacts made with eligible numbers, excluding business and disconnected numbers.

Measurement

Five variable sets were measured in this study for hypothesis testing and statistical analysis purposes. They are conceptually and operationally defined as follow.

Access Motives. Conventional items used in the uses and gratifications literature were adapted here to serve as the measures for this variable; in all, 31 items were constructed and used. These measurement items encompass a comprehensive set of gratification-expectations to reflect various motivational dimensions. After performing principal component factor analyses (with Varimax rotation), seven different factors emerged (with 3 items from the original 31 eliminated due to low factor loadings). All factored dimensions and items are described in Table 1; all items were measured on a 5-point Likert scale ranging from "strongly agree" to "strongly disagree." Definitions for these factors include the following:

1) "companionship" or the motive to relieve loneliness or boredom (Cronbach's $\alpha = .90$),
2) "learning" or the motive to challenge one's intellect--an activity with which one can identify (Cronbach's $\alpha = .85$),
3) "entertainment" or the motive to seek fun, stimulation and excitement (Cronbach's $\alpha = .83$),
4) "habituality" or the motive that is not always intentional due to its routine nature (Cronbach's $\alpha = .83$),
5) "surveillance" or the motive to keep up with current events (Cronbach's $\alpha = .87$),
6) "diversion" or the motive to temporarily escape from one's problems (Cronbach's $\alpha = .86$),
7) "interpersonal communication" or the motive to amass social discourse topics (Cronbach's $\alpha = .86$).

Innovativeness Traits. Treading on the domain of the diffusion literature addressing new communication technology, a total of 15 items were developed--some customized and some adapted--to measure this variable. All items were gauged on a 5-point Likert scale, ranging from "strongly agree" to "strongly disagree." Principal component factor analyses confirmed the following three factors, one item was abolished due to low factor loading (see Table 2 for all items). The first factor, "keep up with innovations," is reflective of an innovator's nature in keeping current with new technology and scientific progress (Cronbach's $\alpha = .89$). A second factor, "explore new challenges," characterizes an innovator's nature of wanting to embrace new challenges (Cronbach's $\alpha = .82$). The third factor, "venturous," captures an innovator's venturesome nature (Cronbach's $\alpha = .75$).

Online Content Access. This concept measures the overall weighted unduplicated access to a specific set of programming units online, i.e., the most commonly listed online service categories on the World Wide Web. A total of 20 most popularly displayed service categories were collected from a dozen major web portals such as Yahoo, MSN, AOL. User access to these categories was measured on a 5-point Likert scale, ranging from "all the time" to "never." A composite online content access level was obtained by summing the access scores and averaging that sum.

Online Access Frequency. The present study defines this concept as "the number of times an online user gets online within a one-month (or 4-week) period. It measures this variable by an item asking the actual frequency for online access with 7 scaled categories, ranging from "more than once a day" to "less than once a month."

Online Access Experience. This concept assesses the duration a user has been on line and whether the user has online access from home. The respondent was asked how long s/he has been on line (as expressed in years and months) and whether they access the Internet from home.

News Media Exposure. Respondents were questioned in terms of the frequency with which they access news media. Exposure to electronic news media--including local television news, national television news and radio news--were measured by 7 scaled categories, ranging from "everyday" to "never" per week. Reading news in a newspaper or a magazine was assessed by 7 scaled categories, ranging from "every day" to "at least once a month" to "never.

Demographics. Standard questions were asked to the respondents including education level (7 categories), marital status, age (7 categories), annual household income (7 categories) and gender. Both marital status and gender were dummy coded.

Research Findings

The following section will describe the background information about the sample as well as all statistical results that pertain to hypothesis testing and other additional analyses. The statistical significance level for all tests is set at $p < .05$.

Sample Demographics

For the sample of this study, a typical online user has been on line for an average of 2.2 years, 69% have home online access and 77% of all respondents own a personal computer at home. This high ratio of personal computer ownership ~~is~~ a reflection of a media-rich population who also owns or subscribes to an average of 6 media technology units (out of the total 13 total units questioned). For example, 84% of the sample are cable television households and 4% receive their television programs via a direct broadcast satellite service.

News media exposure for the sample can be described as follows. National television news viewing occurs on 3.6 days per week, while local television news viewing is done on 4.4 days per week. An average listener listens to radio news on 2.5 days per week, reads a newspaper between 4 and 5 days per week and reads news from a magazine on 2 or 3 days per week.

This translates into an upper-middle income group whose average education level is a 2-year college degree. While 51% of the sample are married, the average number of children living at home is 2. An average respondent is between 35 and 44 years old, with an annual household income of $53,000 per year. The gender split is 50% males and 50% females for the sample.

Hypothesis Testing Results

The multiple regression result indicates that two of the four ritualized motives--companionship ($B = -.15$) and habituality ($B = .31$)--are significant predictors of online access frequency, while none of the three instrumental motives are. Nevertheless, seeking companionship is a negative rather than positive predictor, providing H1a only partial support.

Similarly, as one of the three instrumental motives, surveillance, is a positive predictor of broader online content access. Three of the four ritualized motives are also significant predictors--entertainment, habituality and diversion--with diversion being the only negative predictor. This suggests that H1b is largely supported by the statistical evidence.

Innovativeness traits turned out to be insignificant predictors for both online access frequency and online content access level measures, failing to provide support for H2a and H2b. By the same token, the number of years the user has been online is an insignificant predictor for both online access frequency and online content access level, suggesting that both H3a and H3b are unsupported respectively. In contrast, online access at home is a positive predictor for both online access frequency and online content access level, commanding strong support for both H3c and H3d. News exposure as a predictor variable for online access is irrelevant to the online access frequency equation, lending no support for H4a. However, exposure to national television emerged as a positive and significant predictor for online content access level, supplying a partial support for H4b.

Lastly, demographic variables reveal some interesting patterns of online use. While younger age is the sole significant predictor for online access frequency, it, along with number of children and female gender, are all significant predictors for online content access level.

Discussion

Even though not all the hypotheses were strongly supported in this explanatory study, the underpinning theoretical assumptions, by and large, appear to be soundly grounded. It is particularly encouraging to find that online access motives are largely differentiated between two dimensions of online access patterns--online access frequency and online content access level. This finding not only helps conceptually clarify the distinction between ritualized and instrumental motives for online access, it also theoretically and empirically validates the separation between online access frequency and content access level.

It is interesting to learn that the high-frequency online users are getting online primarily due to habit and a chance to engage in "solitary" activity that aims for positive rather negative pseudo-social interaction purposes. In other words, online access for these users is a non-antisocial, individualized habitual behavior, much like an individualized habitual viewing of television. This finding is significant in that it defies certain preconceived notions that those heavy online users rely on the online medium to keep themselves "socially connected." If fact, the authors of one frequently cited study about "depressed" online users readily concede that their nonrandom sample includes 93 families (with a large number of teenagers) without a "control" group; the study is basically a one-shot study without any long-term or repeated measure (Schwartz, 1998). Granted, there will be "loners" among online users, but they are not the average or majority of online users the study.

By contrast, the online users, who access more diversified content categories, are motivated by the desires to seek news and entertainment--in addition to the less intentional force of "habit"--a staple reason for "volume" users as well. They are, however, not motivated by escapism, or the motive to be diverted from undesirable social realities; instead they aim to experience the social reality online. This particular finding parallels the high frequency online users' reverse "companionship" motive and again depict a lack of negative psychological forces behind both of these online access patterns.

While informational learning is not found to be an access motive, it signals that average users don't get on line to utilize the Internet's information resource for advancing their intellect. By the same token, as seeking "interpersonal communication" topics is also not found to be an access motive, this suggests that average online users don't yet regard the Internet as a source for providing discourse on topics the same way other media outlets do.

In essence, the motivational profile for online users reflects that "habit" or "routine" is the shared motivational attribute between both the high frequency and broad content users. This particular aspect projects that the Internet medium will eventually become a technology appliance in our homes and its users will use it in the way they have used other media appliances in their homes. Even though most users are aware that the Internet emulates an interactive encyclopedia, they still regard it more as a fun headline service, a niche hobby unit, an interactive game channel or an e-mail courier than a valuable information resource. This implies that online users today have yet to fully embrace the Internet as an all encompassing interactive communication medium.

With regard to the concept of innovativeness traits, it is somewhat disappointing to see that this variable failed to contribute to the explanation of Internet use. It should be pointed out that this concept is not spuriously added to regression modeling, as one of the three innovativeness traits measure (i.e., "keep up with innovations") is significantly correlated with online access frequency and all three innovativeness traits measures are significantly correlated with online content access level. It is possible that average online users don't necessarily think of themselves as "innovators," as Internet use spreads across the population at locations encompassing residential homes, offices, schools, libraries and even business establishments such as the Internet Café! In a society where most computers are connected to the Internet, even nonusers may be somewhat familiar with what the Internet is about, what it can do and how it works.

Another potential explanation for the inability of the innovative traits concept to emerge as a significant predictor for the criterion variables could be that learning how to use a personal computer is much more difficult than learning how to access the Internet. This is because once a user is proficient with maneuvering the complex operating system to access various computer features, getting on line comes naturally, as most online access software programs can be easily integrated with the existing operating system.

While the number of years one has been on line was found to be an insignificant predictor for both online access frequency and online content access level, the opposite is true with home online access capability. This finding further explicates why the innovativeness traits concept (at least in the way it is measured here) could not be a significant predictor for online access. Apparently, one's ability to conveniently get online overrides one's online experience as the significant reason for achieving both higher access frequency and broader content access.

As the literature contains contradictory evidence when it comes to the relations between Internet use and general media exposure, the finding that extends and confirms the predictive relationship from national television news use to online content access is worth noting. This finding signifies a more traditional profile of an innovator or an early adopter of new technology, one who is a heavy news consumer and may potentially serve as an opinion leader to help diffuse new technology products in their own reference group. As the literature continues to evolve, the relationship between news exposure or traditional media exposure and Internet use may also shift, thus creating another interesting aspect for future study.

Demographic variables typically become less relevant as predictors for new technology use when the technology's diffusion level is approaching a critical mass. The clear lack of relationships between online access patterns and most demographic variables found in the present study seem to presage what is to come. While younger age is the sole significant demographic variable predictive of online access frequency, confirming past study findings (Cavanaugh, 1996), this suggests that younger Generation X'ers (and their successors) are heavier Internet users than their older counterparts. These younger online users, then, closely fit the "videogame generation" profile of those who are heavy users of interactive electronic media.

By contrast, as having school-aged children at home has been found as an important reason for personal computer adoption (e.g., Crispell, 1994), the present study further establishes that children may also prompt their parents to go online. As the majority of elementary and secondary schools are now wired to the Internet, many young children have also become Internet-literate. When these children go online at home, it is natural that concerned parents may assist their young children to guide them to the desirable sites. The gender bias, like it or not, may have entered into the fray here. That is, women, as the primary care taker of the children may have also become the primary online "babysitter." As discovered in the present study, younger women with school-aged children indeed search a wider variety of online contents perhaps for their own and for their children's consumption interests. This finding then illuminates the need for investigating parental mediation of their children Internet use.

Conclusion

This preliminary study only examined a limited number of potential theoretical explanations to predict online access frequency and content access. The mixed bag of successes and failures associated with the predictive strengths of the various predictor variables are particularly educational in that they helped establish and in some cases clarify the validity and/or reliability of these measures. First and foremost, as online access, by nature, is a much more laborious activity and involves a much higher level of mental effort than television viewing, the theoretical significance of online access motives in relation to online access activity found here is notable. Not only has the theoretical relevance of the adapted measures for audience/user motives proven enduring by the present study, study results also clearly demarcate the two expected conceptual dimensions—ritualized vs. instrumental motives. This result, along with past findings, helps legitimize the validity of the traditional uses and gratifications theory as a strong theoretical perspective to help explain Internet use behavior.

Secondly, the conceptual distinction between online access frequency and content access, as introduced and established in this study--appears to be both theoretically intriguing and complex. These two dimensions of online access, as conceptualized here, may evolve into an important aspect for social-scientific as well as market research where differential online use patterns become an essential element in determining behavioral or marketing outcomes.

Thirdly, the possibility that Internet diffusion is potentially approaching the beginning of a critical mass is real food for thought, considering the fact that the Internet did not become widely available until barely 6 years ago. This finding unveils a "revolutionary" socio-cultural trend not widely found prior to the 1990s, where the "computer literacy mission" actively pursued at home, at work and at school has helped propel this phenomenal growth of Internet literacy. The worrisome aspect of this Internet phenomenon is that the medium is still very young, immature and little understood. Yet, an entire generation of children is growing up with the Web, enjoying both its merits and experiencing its faults as it evolves, often without sufficient guidance and supervision. For that reason, understanding why people go online, what they do online and how their access frequency and content access patterns influence their social behavior and society as a whole remains an important question for future research.

Table 1 Factor Analysis for Internet Use Motives

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
Companionship							
Have something to do	.84						
Relieve boredom	.80						
Keep me occupy	.79						
Keep me company	.70						
Make me less alone	.65						
Pass time	.64						
Learning							
Advance my knowledge		.71					
Extend my mind		.71					
Open me up to new ideas		.67					
Let me explore new things		.66					
An activity I identify with		.65					
A comfortable activity to me		.64					
Challenge my intellect		.51					
Entertainment							
Entertaining			.79				
Exciting			.73				
Fun			.69				
Interesting			.67				
Habituality							
Routine				.87			
Habit				.80			
Second nature				.77			
Surveillance							
Get national news					.90		
Get world news					.88		
Get local news					.68		
Diversion							
Forget my problems						.84	
Escape my worries						.82	
Interpersonal Communication							
Give me things to talk with people							.82
Give me things to talk with family							.81
Give me things to talk with friends							.77
Eigenvalues	9.7	3.4	2.0	1.8	1.7	1.4	1.3
Variance Explained	31.4%	11%	6.4%	5.7%	5%	4.4%	4.1%

Table 2 Factor Analysis for Innovativeness Traits

	Factor 1	Factor 2	Factor 3
Keep Up with Innovations			
Find new technology fascinating	.75		
Like to learn about new inventions	.70		
Interested in scientific progress	.69		
Keep up with new technology products	.83		
Keep up with computer technology	.84		
Keep up with new technology	.83		
Explore new challenges			
Like new challenges		.66	
Inquisitive		.77	
Curious		.67	
Interested in learning new ideas		.77	
Seek opportunity to learn new skills		.69	
Venturous			
Like taking risks			.86
Venturesome			.78
Unconventional			.67
Eigenvalues	5.79	1.98	1.33
Variance Explained	41.1%	14.2%	9.5%

Table 3 Multiple Regression Analysis for Online Access Frequency

Predictor Variables	Beta	P <	R^2 Change	P <	Final R^2
Step 1: Use Motives			.157	.000	
Companionship	-.15	.045			
Learning	.09	**			
Entertainment	.08	**			
Habituality	.31	.000			
Surveillance	-.03	**			
Diversion	-.11	**			
Interpersonal Communication	.01	**			
Step 2: Innovative Traits			.013	**	
Venturous	.07	**			
Keep Up with Innovations	.08	**			
Explore New Challenges	-.08	**			
Step 3: Online Access			.057	.000	
Numbers of Years On Line	.10	**			
Home Access Availability	.19	.001			
Step 4: News Exposure			.014	**	
Local TV News	.003	**			
National TV News	.12	**			
Radio News	.06	**			
Newspaper	.06	**			
Magazine News	-.02	**			
Step 5: Demographics			.023	**	.26
Education Level	.02	**			
Married	.06	**			
Number of Children At Home	.05	**			
Age	-.16	.02			
Household Income Level	.05	**			
Gender	-.04	**			

Table 4 Multiple Regression Analysis for Online Content Access Level

	Beta	P <	R^2 Change	P <	Final R^2
Predictor Variables					
Step 1: Use Motives			.259	.000	
Companionship	-.07	**			
Learning	.03	**			
Entertainment	.26	.000			
Habituality	.18	.002			
Surveillance	.21	.001			
Diversion	-.14	.011			
Interpersonal Communication	.004	**			
Step 2: Innovative Traits			.01	**	
Venturous	.01	**			
Keep Up with Innovations	.10	**			
Explore New Challenges	-.07	**			
Step 3: Online Access			.065	.000	
Numbers of Years On Line	.09	**			
Home Access Availability	.25	.000			
Step 4: News Exposure			.013	**	
Local TV News	.01	**			
National TV News	.16	.007			
Radio News	.08	**			
Newspaper	.02	**			
Magazine News	-.02	**			
Step 5: Demographics			.074	.000	.42
Education Level	.07	**			
Married	-.02	**			
Number of Children At Home	.15	.003			
Age	-.25	.000			
Household Income Level	.02	**			
Gender	.11	.03			

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North Korea and the Internet

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Abstract

North Korea, an output of *Cold War*, is facing a new challenge with the advent of the Internet as a nation state. To provide a perspective of how a country tries to control and increase its power as a nation-state in the world of global telecommunication network, this study investigated the development of North-Korean Internet sites and characteristics of those sites. A list of pro-North Korean sites and discussion with experts are also included.

North Korea and the Internet

North Korea occupies a peculiar position in the international society at the end of 20th Century. The political system of the country is the output of the *Cold War*. However, owing to the Kim family's dictatorship (55 years), the whole population has been isolated from the world for the entire history of the country, even after the end of the *Cold War*. Thus, though increasing, the quantity and quality of communication with North Korea and its people has been limited strictly by the government and, along with its isolation policy, the country still remains as a distant island. Nevertheless, with the advent of new communication technologies such as Internet, this isolated country is facing a new challenge. Like many other local governments, its control across the border is becoming weaker due to the extremely complicated nature of new information and communication technologies.

Although North Korea has not been heavily involved with the Internet, the number of North Korea-centered, and Pro-North Korea Web sites including its first official Web page in 1997 has been growing fast. Besides, there are many signals that show North Korea is beginning to realize the potentiality and danger of the Internet. Since there are numerous historical incidents that portray the conflicting relationship between established social order and new technologies, it is quite possible that the North Korean government's controls over communication across their borders become complicated and consequently weaken before this new communication method.

To provide a better understanding of the relationship between new communication technologies and nation-states, this study investigates how North Korea government uses the Internet. The development of North Korean Internet sites and the characteristics of those sites will be addressed. This will offer a perspective of how a country tries to control and increase its power as a nation-state in the world of global telecommunication network.

Power, Nation-States, and new communication technologies

Enmeshed in the political structure of social groups, classes, and institutions, states exercise various powers to maintain or transform their environment.[1] Since different forms of power function differently and independently, different types of states have used different forms of power historically. Based on the history, Braman (1995) suggests that culturally bound nations exercise their greatest strength in symbolic power, whereas bureaucratically defined states find their greatest strength in structural power. Instrumental power is used by both nations and states as needed as in ritual practices of nations and police and judicial mechanisms of states. However, often, instrumental power determines the conditions under which symbolic, structural, and transformational power may be exercised in the countries.

Throughout the changes of society, states have followed various procedures to continue and increase its power. However, in today's environment, the ability of state governments to build and implement information policy is becoming more and more important owing to the exponentially increasing dependence of human activities, quantitatively and qualitatively, on information and communication technologies. When it comes to the fact that transnational communications have eroded the powers of the modern states, the importance of information policy to local governments becomes clearer. States control over information is especially critical for weaker nations on the defensive, for whom the smallest scrap of power could tip the balance between survival and disaster (Headrick, 1991, 8). This changing paradigm is well demonstrated in the growing tension between different international communication regimes over broadcasting, electromagnetic spectrum allocation, telecommunication, remote sensing and such, and in the domestic conflicts between local governments and individual/corporate users over the control of access to information technologies and content of communication.[ii]

In spite of a number of different theories and approaches to the state, it has been widely accepted that there is no single definition of the state. Instead, today, many different types of nation-states co-exist with different level of industrialization as well as political and economic structure. In addition, the limits of political theory of states become apparent in the teeth of the rapid change of global environment resulting from the development of information and telecommunication technologies. Thus, as Braman (1995) points out, analysis of the state is more accurate if the state is understood as an evolving form than as something static.

As a hybrid form of Nation and State,[iii] Nation-States emerged with the early development of the European state system from the 16th century (Held, 1989). Since then, the shape of modern states has been changing based on the shifting balance between order and crisis along with competing theoretical interpretation of state itself. Recent diffusion of new information and communication technologies is another source of crisis forcing the state, like other institutions and cultural forms, to evolve.[iv] Angell and Greenberg share the view, with many others, that information and communication technologies influence the development of government just as governments affect the development of technologies (Angell, 1996, Greenberg, 1998). Because of the inherently globalizing inclination of technological development and use, the effectiveness of local state power is being threatened seriously by the global network. Individuals and companies are setting up large trans-national networks that pay no attention to geographic national boundaries and barriers. This has given people the ability to conduct economic transactions and other activities without regard for borders and beyond the control of national governments. This powerlessness of Nation-states is an inability to exercise structural power, the forces that shape social, political, and economic interaction and information flow (Braman, 1991). Though it is not going to disappear soon, it seems fair to say that the role of the Nation-states will have to be modified to survive in this changing environment. In fact, considerable number of local governments perceives information and communication technologies as vital to their very survival (Hepworth, 1990, 212).

Braman (1995) identified three characteristics of the contemporary state; first, both the form of today's states and the ways in which it can exercise power are extremely complex; second, domestically, society has become deeply penetrated by the state as it intervenes in more areas of life than ever before; third, in turn, the state itself is highly penetrated by both state and non-state entities in the international environment. Clearly, the state is losing power significantly by reason of the fast technological development and multiplying trans-national informational activities. In other words, state autonomy, the ability of the state to operate on its own, without involving other state or non-state actors, is being lost in the context of the complex telecommunication network and interdependence with other institutions in it. The most important source of decline in state power is the shift of much key decision-making for the state from the state itself to transnational corporations. The fact that 80-90 percent of so-called 'transborder data flows' are generated by intra-firm transactions well represent changed loci of power (Hepworth, 1990, 95). Though their potential for controlling the system is not overlooked by governments, private corporations are developing most of the new information technologies. In a transnational communication study, Sussman (1995) also proved that the potential value of the mass media and telecommunications to the state is lost to supra-state interests because the mass media and telecommunications had become dissociated from the development of individual society. Held (1990) argues that, though the idea of *de jure* sovereignty remains compelling with regard to the state's capacity to wield coercive power, the operation of states in an ever more complex international system, which limits their autonomy and infringes their sovereignty, undermines the cogency of those traditional state's sovereignty[v]. Indeed, many other researchers go on to claim that the concept of state as an independent unit is quaint, if not extinct.

However, at the same time, there are contradictory effects of the use of new information technologies on state power. Headrick (1991) stated, "technology confers power, but the consequences of that power are anything but predictable (3)." This is because technology has a paradoxical nature of the complex effects of emancipation and domination. Certainly, the use of new information and telecommunication technologies, in many places, variously strengthens different types of state power as much as it weakens other kind of power in ways that also vary from state to state. Most of all, many state governments perceive information and information technologies as vital to their very survival and thus try to play an active role conditioning its future power through several policies. Besides, digitalization of diverse forms of information makes it easier for a state government to control over its population. For the telecommunication network requires a large-scale infrastructure, dependence upon which also means increased dependence on the state and its control. Populations may not recognize state use of highly sophisticated information technologies as in Mexico in the 1950s (Barrera, 1995)[vi]. The new media itself create a new demand for increased state regulatory activity (Bell, 1995). In a nutshell, the state continues to play an important role, even in the new environment of global telecommunication network.

Awareness of these sources of increased strength of states resulting from information technologies decreased the expectation that the state is in decline and interest in the state revived in the 1990s. States are stimulated to reassert themselves in the area of communication policy and consequently the state continues to play a role even while other types of institutions increasingly dominate both global and local decision making processes (Braman, 1995). Nevertheless there is still general agreement that the ability of many states to control domestic events or international affairs is declining, and that even domestic decision-making for all states must take into account power exercised by both other states and by non-state entities. What is clear is that, whether or not one take an extreme view on the fate of nation-states, the development and use of new information and telecommunication technologies make the process of exercising state power extremely complex. By interconnecting with other states and non-state institutions sharing mutual influences, individual state governments are losing and strengthening their power simultaneously. This is what paradoxical vulnerability of the state, which commands the contemporary culture of nation-states.[vii]

Though states and societies are rapidly being interconnected and interrelated, not all states are equally integrated into the changing world information and communication structure.[viii] Considerable number of countries lack necessary social infrastructure and economic resources. Still, well over 40 countries have less than one telephone line per one hundred people (Mansell and Wehn, 1998). Expensive access cost is another difficulty in many places, let alone the absence of reliable power sources or other social infrastructures such as transportation and banking. For example, in Ghana, there were only ten 14,400 kilobit/s leased lines linked to the United Kingdom costing about US$ 7,500 per month each in 1995 (Mansell and Wehn, 1998, 106).

On the other hand, since international telecommunication systems involve the exercise of power, many countries are very cautious and often against the open international information infrastructure. Only permitting the minimum level of interaction certain number of states are just staying out of the game simply because they do not want to lose control over centralized and closed telecommunication systems. These states commonly restrict access to technologies and content by non-state players and monopolize the use of the technologies by state agents. Among those, North Korea's efforts to maintain its power as a nation-state externally through its isolation policy and internally through severe restriction to technologies demonstrate the paradoxical characteristics of the vulnerabilities of the state.

In North Korea, basically, the *Theory of Self-reliance* (*Juche Idea*, International isolation policy) and the *Singular Ideology* (*Yuil Theory*, Ideology for Kim Il Sung's supremacy) compose the basis of the value system. These two are paramount in all aspects of North Korean society, be it in politics, economics, or other areas. It is like a huge surveillance system in the novel *1984* with no way out. The communist party has taken control of all areas of daily life such as rationing of food, relocation, or employment, and all activities must be conducted in accordance with party dictates. Private lives are monitored by State Security and the Party itself, leaving little room for individual freedom. Virtually every member of the population is mandated to enroll in one of the myriad social organizations (Children's League, Youth League, Worker's Confederation, Agricultural Union, and Women's Union) to facilitate control and management. Though its military technology might be as advanced as any other developing country's, the electronics industry in North Korea is rudimentary at best compared with other nations. While *Pyongyang Integrated Circuit Factory* and *Electronics Engineering Research Institute* produce basic semiconductor elements and small-scale IC chips, goods requiring advanced technology cannot be produced. Though North Korea has tried to develop its own computer manufacturing technology since the 1960s, only the most rudimentary computers are produced due to a shortage of technical manpower and to the primitive semiconductor-related electronics industry. Since the 1980s, research institutes like *Science Research Institute* have imported key components like CPUs and ICs and succeeded in assembling 8-bit grade computers. Consequently, North Korea has focused on improving its backward computer technology since the mid-1980s and proposed automation, robotization and computerization of all industries as the main target of scientific technology development. To attain that goal, introduction and development of computer technology was carried out through invitation of computer technicians from *UNDP*, *UNIDO* and Eastern Europe or through dispatch of North Korean technicians to Japan, ex-Soviet Russia and Eastern European countries to pursue development of North Korea's own technology. Currently, the Pyongyang computer assembly factory possesses an annual production capacity of more than 30,000 units of computers. *Pyongyang Program Center* and *Chosun Computer Center* develop or utilize more than 30 kinds of software such as *Korean Front End Processor* for Window 95, Chosun word processing program, (*Tangun*) and Korean Word processor ((*Changdock*).[ix]

Compared to other countries, due to its internal political, economic, and technological problems, North Korea has not been heavily involved with the Internet. As of 1999, as in many other least developed countries, many North Korea-oriented Web pages are produced by observers from other countries or by international organizations.[x] Where information is provided by the North Korean government, it is very generic, frequently offering basic contact information or touring information. Besides, in many cases, additional links are either old or dead. On the Internet, North Korea did not even exist officially before 1997, when its only news agency *Korean Central News Agency* bought a domain server in Japan and started daily news reporting.[xi]

However, there are many signals that show North Korea is beginning to realize the potentiality and danger of the Internet. Most of all, the government is utilizing this new medium to collect information from opponent states, while providing the least amount of limited political news through their sites. It has been reported that Internet sites operated by the U.S. Defense Department are most popular among users in North Korea for many years. North Korean users are also reportedly trying to interfere with the American military's high-tech command system seeking information on personnel and their numbers, as well as major weaponry systems and their capabilities (*Daily Chosun*, 15 September 1999).

Yet, with the coming of the Internet, North Korea is facing a new challenge. Though Internet may allow a power group in North Korea to gain more control supporting existing political structure, at the same time, this new information technology can be a strong centrifugal force, giving power to individuals to fight polemic tyranny. There are numerous historical incidents that portray the conflicting relationship between established social order and new technologies. For late examples, the fax was a tool of the student revolt in China in 1989 and, in Poland, the Xerox machine was indispensable to the Solidarity labor movement (Lubar, 1993). Therefore, it is quite possible that, as in many other states, the North Korean government's controls over communication across their borders become complicated and consequently weaken before this new communication method.

Although North Korea on the Internet is such a promising topic for telecommunication policy studies, to date, no one has attempted to address these two together.[xiii] A number of issues such as content features of North Korea-related Web sites, network culture, social and legal concerns and Internet policy of the government have yet to be explored. The primary purpose of this study is to investigate how North Korea government uses the Internet. In order to provide a better understanding of the relationship between new information and communication technologies and North Korea, this study addresses how North Korean Internet sites, if any, have been developed and what are the characteristics of those sites. This would provide a perspective of how a country tries to control and increase its power as a nation-state in the world of global telecommunication network.

The development of pro-North Korean web sites

As of December 1999, there were about one hundred North Korea-centered sites[xiii] including two North Korean official sites and those maintained by individuals, organizations, universities, and other governments. The U.S. Congress and CIA also have North Korea sites. There are a few pro-North Korean sites[xiv] by North Korea individuals and organizations promoting *Juche Idea* meaning self-reliance, the main political ideology of the country. It is known and reported by mass media that there are now twenty some pro-North Korean sites opened in other countries including the U.S., Japan, and Australia (*Hankyerae News*, 29 October 1997, 23 September 1999, and Petrov, 1999). So far, this study has identified the following official North Korean sites and pro-North Korean sites, a total of 15 (see table 1).[xv]

Table 1. Official North Korea's sites and pro-North Korean sites[xvi]

No	Address	Host	Characteristics
1	Http://www.kcna.co.jp/index2.htm	Korea Central News Agency	The first official site since 01/13/97 until 10/10/99 (In Japan)
2	Http://www.drpkorea.com	Pan-Pacific Economic Development Association of Korean Nationals	The official site since 10/10/99 (In Hong Kong)
3	Http://www.dpr-korea.com/english.html	Kumgangsan International Group	The first NK centered site since Dec. 1996 (In U.S.)
4	Http://www.korea-np.co.jp/pk	The People's Korea	
5	Http://www.korea-np.co.jp/	Chosun Sinbo	
6	Http://www.korea-np.co.jp/io/index.htm	IO magazine	
7	Http://www.kimsoft.com/korea.htm	Korea Webweekly	Large amount of information about South and North Korea since as early as October1996.
8	Http://www.alles.or.jp/~kuguk	The National Salvation Front	
9	Http://members.tripod.com/~ikkokudo/	Kim Jong-Il's Secret Treasure House	
10	Http://www.rtd.com/~lippard/chajusong/	Australian Association for the Study of the Juche Idea	founded in Brisbane on 16 February 1998 for Kim Jongil's
11	Http://www.geocities.com/CapitolHill/Lobby/1461/	Australian Association for the Study of the Juche Idea	Birthday

12	Http://www2.marinet.or.jp/~tongi /	tongi@marinet	
13	Http://www.cnet-ta.ne.jp/juche/defaultc.htm	International Institute of the Juche Idea	
14	Http://www.kt.rim.or.jp/~mujigae /cdrindex_e.html	Rainbow Trading Co.	
15	Http://www.geocities.com/Tokyo/1446/flash.html	Kim, K.[xvii]	

North Korea-related sites on the Internet began to appear at the end of 1994 and were boosted by the on-line campaign led by Bernard Crisher who was a reporter for the New York Times in Tokyo to help victims of North Korea's flood disaster (*Donga News*, 28 October 1996). According to Young S. Kim, editor of the *Kimsoft.com* – the earliest and biggest North Korea information source site started in 1995[xviii] – there was no North Korea-centered homepage by the end of 1995. The first serious effort to create a North Korea-centered site was made by a Japanese video camera operator Tatsuo Sakai. [xixxx] After a few attempts to access a Tokyo Internet server from Pyongyang in vain, he set up one of the earliest and most fascinating sites on North Korea in Japan in December 1996 (Petrov, 1999). Though it is believed among many that the site was directly sponsored by North Korea, Tatsuo Sakai's home page, entitled "The Democratic People's Republic of Korea (DPRK) Welcomes You!," opens with the words: "This was made with point of view of Japanese businessman. This is not Official Homepage of DPRK".[xxi] This site has English and Japanese versions providing North Korean tourist information, popular music, and short video clips. Within the first four months Tatsuo Sakai's site was visited by 67,000 Internet users; currently this number is more than 440,000.[xxii]

It seems safe to say that North Korea became interested in the Internet and started preparation for opening an DPRK official site in 1996 because North Korean made its first official entry to the global communication network in early 1997 (January 13).

Since DPRK did not have access to the Internet, the site was opened in Japan (Tokyo) by the Korean News Service (KNS) - the Tokyo bureau of KCNA. Though there were a couple of pro-North Korea sites by individuals and organizations, this was the first time that a North Korean government organization opened a web site. The site posted the country's official news provided by the Korean Central News Agency in North Korea on a regular basis.[xxiii]

Since its first entry to cyberspace, North Korea has kept trying to increase its presence and audience on the Internet. Following NCNA, Choson Sinbo Company started a regular on-line publication of The People's Korea newspaper in July 1997, sponsored by the pro-North Korean General Association of Korean Residents in Japan. At the beginning, both sites were only in English and Japanese, but later, Choson Sinbo and KCNA added a Korean language edition. In 10 October 1999, DPRK government introduced another official Internet site, *Chosun Infobank*. The site was by *Pan-Pacific Economic Development Association of Korean Nationals,* which is based in Hong Kong and being maintained with the North Korean government's supports. *Pan-Pacific Economic Development Association* was founded on 15 April 1999 in Beijing by 88 pro-North Korea businessmen to construct Internet networks between Asia and Pacific America (*Younhap Press*, 21 October 1999). The site carries Kim Jung Il's activities, North Korean news, laws, business and tour information. It also sells stamps and many other things including $2,000-a-year-membership of the site. For the first ten days, the number of visitors to the site was 2179; currently this number is more than 38,000 (as if December 29, 1999). If fact, in many cases, *Chosun Infobank* is reported as the first

DPRK's official Internet site (*Nihon Keizai Shimbun*, 21 October 1999, *Daily Chosun*, 21 October 1999, *Donga News*, 21 October 1999, *Hankyerae News*, 21 October 1999).

Characteristics of North Korean Official sites

DPRK's two official sites, KCNS (http://www.kcna.co.jp) and Chosun Infobank (http://www.dprkorea.com), are respectively in Japan and Hong Kong.[xxiv] There is no web site physically located in North Korea. No Internet site is registered using North Korea's country code "kp" yet, either (*Hankyerae News*, 13 July 1999).[xxv] This is probably because of their poor telecommunication infrastructure. Up until the late 90s, North Korea firmly pursued an ideology of self-sufficiency and self-reliance, and was not seriously interested in developing its telecommunication systems. There are about one million telephone lines, but most of them are using a rotary system through which Internet connection is virtually impossible. International calls are possible only through the Pyongyang International Satellite Communication Center (*National Intelligent Service*, 1999). Even though AT&T has been operating a direct-dial service between the U.S. and Pyongyang since 1995,[xxvi] it is available only within Pyongyang – the capital city. For the rest of the world, the North Korean telephone network is still closed.[xxvii] Although government organizations have their own telephone and fax connections, it is practically impossible to use them for a direct call. The only system for urgent communication is Telex. Before he set up the first serious North Korea-centered site, Tatsuo Sakai tried at first to send and receive data through the North Korean telephone network. He lamented the technical problems:

> I tried to access a Tokyo Internet server from Pyongyang in June of last year in vain. The telephone connection was so poor that I was unable to connect. The Tokyo BBS can be accessed with a 2400 bps modem but the Pyongyang modem could only connect at less than a quarter of that. My company has an office in

> Pyongyang and I hoped to distribute some information but failed. I can see why the Internet is virtually non-existent in North Korea. By the way, I can connect to the Internet at 14,400 bps from a hotel room in Beijing (Petrov, 1999).

When North Korea began officially publishing news on the web for the first time in 1997, obviously it was for foreign audiences and Koreans overseas, not for inside citizens of DPRK,[xxviii] because the site was only in English. The homepage (kcna.co.jp) posted the country's official news provided by *Korean Central News Agency* in North Korea on a regular basis. It contained relatively simple daily news, recent and past. Other few components of the site were a brief introduction of KCNA (103 words) and e-mail links to the editor all in English.[xxix] Within a year, however, KCNA added a Korean version trying to increase its readers and possibly aiming at South Koreans. This might be a sign implying North Korea realized the potentiality of the Internet as a medium for its propaganda.[xxx] Korean version of the site included, besides its original contents, North Korean Constitution, *Rodong Sinmun* news (A news organization of North Korean Worker's Party), official documents, unification policy, and writings of the General Secretary – Kim Jong Il.

The second official site (dprkorea.com) shows clearly that North Korea tries to utilize the potentiality of the Internet in various ways targeting a Korean-speaking population. As mentioned earlier, this Korean language-only homepage carries Kim Jung Il's activities, North Korean news, laws, business and tour information as well as advertising for North Korean stamps and many other things including $2,000-a-year-membership of the site subscription.

Politically, the content of the two North Korean official Internet sites merely repeat the officious style of the propaganda without paying any attention to the reality of its people. Like in many other pro-North Korean sites, the writings and activities of Kim Jong Il and *Juche* ideology constitute core parts of the two official sites. Other than this faultless Great Leader, revolutionary intelligentsia and the images of happy workers dominate the site (Petrov 1999). Under the worst foreign currency shortage resulting from an economic crisis after a series of floods and droughts, North Korea has been trying to lure foreign businesses and this also is well represented in their official web sites. Though unsophisticated, with many misspelled words and broken pictures,[xxxi] Pan-Pacific Economic Association's site especially is carefully designed to attract potential investors. It not only sells books, movies, and music disks but also provides a wide range of product information from foods and clothing to computer and related technologies.[xxxii] To facilitate export, the site goes on to discuss and explain banking, companies and factories available for trades, taxation regulation, and recommend to e-mail to report any difficulties in doing business with North Korea. Finally, it has a section for business consulting service and shows how thing are going at the *Rajin-Songbong Free Economic Zone*. It seems that Pyongyang is anxious to establish close economic relations with foreign capitals.

Discussion

This study tried to overview how North Korea government uses the Internet to control and increase its power in order to understand the relationship between new information/communication technologies and the exercise of power by Nation-states. Since nobody has paid scholarly attention to the issue, as a start for more meaningful progress, the development and characteristics of North Korean web sites were examined.

First of all, it is clear that North Korea has realized the potentiality of the Internet and started to utilize this new medium.[xxxiii] Even though there is no web site physically located in North Korea probably because of security concerns and its poor telecommunication, the government opened its official web site in early 1997 and added another in 1999 respectively in Japan and Hong Kong. Though not official, about 15 pro-North Korean sites also exist located all over the world actively supporting and distributing *Juche Idea* and other pro-North Korea opinions. The contents of North Korean official sites are heavily focused on promoting the government's political propaganda such as the writings and activities of Kim Jong Il and *Juche* ideology in officious style with little space for the reality of its people. Another important character of North Korean sites is the orientation toward foreign investment. Due to the worst economic crisis in North Korea's history, the closed country has been trying to solicit foreign capitals and this investment-related information composes another important trait of their official web sites. In a nutshell, to North Korea, the Internet is still just another vehicle to advocate and support the Communist regime's propaganda and to solicit foreign investments.

Recently, North Korea has built an fiber optic network between Pyongyang, Hamheung, and Nampo and also finished an Internet connection experiment with Australia successfully with its own computer network and web browser (Hankyerae News, March 15, 1999). It is quite possible that North Korea will increase the level of Internet operation to maintain and increase it power as a nation-state soon. However, with the ability to use the Internet monopolized by the government, together with other communication means, this new communication technology will at least for some time, only help to strengthen the power of the North Korean government rather than providing a centrifugal force to the individuals to fight the tyranny.

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[i] Lukes (1974) proposes a typology of three forms of power: *Instrumental* (power over the body), *Structural* (power over behavior, rules and regulations), and *Consensual* or *symbolic* (power over thought). Another form of power - *transformational* power - is emerging with today's explosively increasing information processing and flows, the power over the practices by which the elements of potential power were transformed into actual power. Braman (1995) asserts that control over those practices, especially through the net, has become the dominant form of power altogether. According to her, information processing and flows are increasingly the most significant form of transformational power globally.

[ii] In Myanmar, possession of a computer with networking capability is an offense that can lead to a custodial sentence of 7 to 15 years.

[iii] Braman's 1995 article summarized the study of *State* and *Nation* respectively.

[iv] Beniger (1986) locates recent diffusion of new technology as an another installment in the continuing development of the Control Revolution. A series of technological innovations in 19th century Industrial Revolution increased the need for control (the Crisis of Control), and again this crisis created the need for further innovation in information processing and communication technologies (Control Revolution). Microprocessing and computer technology is not a new force but merely the most recent installment in the continuing development of the Control Revolution.

[v] According to Held, sovereignty is, stemming from Hobbs and Rousseau, an illimitable and indivisible form of political power.

[vi] Mexicans were generally unaware of the government's building and use of the microwave network in the 1950s.

[vii] This term "vulnerability of the state" was first used in a report to the Swedish government on the computerization of society, the *Tengelin Report* (1981), and since became popular (Braman, 1995).

[viii] Regarding this discontinuities, Held (1990, 237) points out that while national political outcomes will be heavily influenced by global processes in some countries, in others regional or national forces might will remain supreme.

[ix] National Intelligent Service (S. Korea). North Korea Industry: Computer industry [Posted on the WWW]. Retrieved February 21, 1999 from the WWW: http://www.nis.go.kr:7000/democratic/index.html

[x] Mostly these organizations are religion, food aid, or human rights-related sites.

[xi] www.kcna.co.jp

[xii] The only article on the issue is *The North Korea in the Cyberspace* by Leonid A. Petrov and was posted in his personal web page in September 23, 1999 (retrieved in December 30 from http://fortunecity.com/meltingpot/champion/65/dprkint.htm).

[xiii] North Korea-centered site refers to a web site in which North Korea and information about the country and its people are the main content.

[xiv] Pro-North Korean site refers to a web site in which the content promotes North Korea's *Juche* ideology and shares its political opinions.

[xv] In fact, the source of the number of 20 is Leonid A. Petrov, the writer of *North Korea in the Cyberspace*. However, Petrov himself agreed with the fact that it is very difficult to distinguish between the pro-North Korean site and the North Korea-centered site. He also agreed that the list in table 1 include "99% of all that is currently available on the Internet. (personal letter to the writer)"

[xvi] South Korean Government is for security purpose keeping an eye on pro-North Korean sites. According to the South Korean police, there are about 10 pro-North Korean Internet sites. 9 are based in Japan and 1 in the U.S. (*Hankyerae News*, 22 October 1999)

[xvii] Kim, K. is a retired mathematician at the Brockport University.

[xviii] He recalled starting to carry KCNA news through a German University radio station web site in 1995 as a part of his software development company site. He later began to archive things on North Korea in March 1996 (personal letter).

[xix] The first incident happened in June 1996. A Canadian student (David Burgess, Political Studies, University of Saskatchewan) opened a personal homepage carrying a portrait of Kim Ilsung and some eulogizing exclamations such as, "Long Live Great Leader Comrade Kim Jongil!" However, Burgess soon shut it down under pressure from the South Korean government (Fight-censorship-announce list, retrieved September 23 1999, 8:09 AM from http://www.eff.org/~declan/fc/).

[xx] Even though kimsoft.com existed as early as 1994, since the site serves news and information on both Koreas as well as his own company, it is hard to say kimsoft.com is the earliest North Korea centered site. However, it is noteworthy that, before KCNA's site appeared, the regular publication of official North Korean news on the Internet was undertaken only by Kimsoft.com from March 1996 to January 1997.

[xxi] In his e-mail message to the writer, Young S. Kim, the editor of Kimsoft.com, said, Mr. Sakai works for the Kumgang International of Mrs. Park, a Korean-American businesswoman. Mr. Sakai's web is actually located in America, virtual-hosted by an American ISP.

[xxii] This is the biggest number of all pro-North Korean sites..

[xxiii] Currently, the number of visitors to the site is about 138,000.

[xxiv] Chosun Infobank uses three different addresses which are http://www.dprkorea.com, http://www.korean-nationals.com, and http://www.korean.com.cn. The third address, http://www.korean.com.cn, is currently not working. Anyway, it is possible that Chosun Infobank has two locations.

[xxv] Kim, K., who has a pro-North Korean site - Anju, NK, also confirmed the fact that "there is no website physically located in NK. (Personal letter to the writer, February 23, 1999)"

[xxvi] After 45 years of economic embargo, U.S. allowed telecommunication companies to provide services to North Korea in 1995 and AT&T became the first Western company operating in DPRK (Petrov,1999)

[xxvii] U.N. also has an exclusive direct phone connection with North Kroea

[xxviii] Internet access for North Korean people is not possible for economic, security and technical reasons.

[xxix] It has links to the Choson Sinbo and the People's Korea, now.

[xxx] About the same time, the *Choson Sinbo* also added a Korean version of the site, too.

[xxxi] The search engine in the site is an illegal copy of Dulebak 3.0 from a South Korean software company (*Hankyerae News*, 15 December 1999).

[xxxii] More detailed information was available only for its members who paid the fee ($2,000 a year). The writer could not go further because it would be a violation of law for South Korean including the writer.

[xxxiii] Chosun Infobank uses three different addresses which are http://www.dprkorea.com, http://www.korean-nationals.com, and http://www.korean.com.cn. The third address, http://www.korean.com.cn, is currently not working. Anyway, it is possible that Chosun Infobank has two locations.

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